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ABSTRACT

As part of a program review process, an evaluation was done of the academic pharmacy programs at the University of Florida and Florida A & M University. The evaluation was based on site visits and review of all self-study materials. The most prominent finding and related recommendation for both programs was that Bachelor of Science in Pharmacy programs at both institutions be eliminated and that the post-bachelors degree, Doctor of Pharmacy (Pharm. D.) be the only entry-level program. This move would bring these institutions in line with current national standards. A review at both schools in 1985 had also strongly recommended discontinuing the bachelor's program but these recommendations were not approved. Other current recommendations concerning the University of Florida program include: review the curriculum, recruit new faculty, increase student and faculty diversity, address low faculty morale, bring faculty salaries to competitive levels, increase laboratory space and equipment. Recommendations for Florida A & M include increasing laboratory and office space, implementing an enrollment management program for the graduate program, improving financial aid administration, filling faculty vacancies, and exercising caution in expanding an existing Master's program to a Pharm. D. until a critical mass of graduate faculty is reached. Appendixes include information on the author, professional association statements on accreditation and degree program design, data on pharmacy programs nation-wide, and a survey on position concerning Pharm. D. (JB)

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STATE UNIVERSITY SYSTEM OF FLORIDA

PHARMACY PROGRAM REVIEW

CONSULTANT'S REPORT

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Table of Contents

Introduction..... 1

Discipline Issues..... 3

University of Florida..... 8

Florida A & M University.....22

Appendices.....37

A. BOR Consultant's Curriculum Vita

B. ACPE Schedule for Revision of Accreditation Standards and Guidelines

C. Joint Statement in Support of Entry Level Pharm.D.

D. AACP News Release on Pharm.D.

E. AACP Statistics on Pharmacy Programs

F. Survey on Position Concerning Pharm.D.

G. Survey of SUS Pharmacy Graduates and Employers

INTRODUCTION

As a part of the program review process established by the State University System of Florida Board of Regents, a consultant was commissioned to evaluate the academic pharmacy programs at the University of Florida and Florida A & M University. The consultant was Marcellus Grace, Ph.D., Dean, College of Pharmacy, Xavier University of Louisiana, New Orleans, LA.

The evaluation was a joint site visit between the Florida Board of Regents (BOR) and the American Council on Pharmaceutical Education (ACPE). For the BOR, Dr. Grace was accompanied by Dr. Gita Wijesinghe Pitter, Associate Director of the Office of Program Review. The members of the ACPE evaluation team at the University of Florida site visit consisted of Dr. Jordan L. Cohen, Dean, College of Pharmacy, University of Kentucky; Dr. Mary-Anne Koda-Kimble, Professor and Acting Chair, Department of Pharmacy Practice, School of Pharmacy, University of California at San Francisco; Dr. John W. Mauger, Professor of Pharmaceutics, College of Pharmacy, University of Nebraska and a member of the Council of the ACPE; Dr. Daniel A. Nona, Executive Director, ACPE; Dr. Jeffrey W. Wadelin, Associate Director, ACPE; and Mr. James A. Norris, representing the Florida Board of Pharmacy. The members of the ACPE evaluation team at the Florida A & M University site visit consisted of Dr. H. W. Matthews, Dean, School of Pharmacy, Mercer University; Dr. Mary-Anne Koda-Kimble, Professor and Acting Chair, Department of Pharmacy Practice, School of Pharmacy, University of California at San Francisco;

Dr. John C. Russell, Associate Dean, College of Pharmacy, University of Illinois, Chicago; Mr. Jack L. Coffey, Member of the ACPE, Mr. John Taylor, Member of the Florida Board of Pharmacy; and Dr. Daniel A. Nona, Executive Director, ACPE. At each university, the ACPE conducted a regular on-site evaluation team visit and the BOR conducted a program review which was integrated with the ACPE visit.

The site visit for the University of Florida was conducted on February 1-3, 1994. The Florida A & M University site visit was conducted on October 24-26, 1994. This consultant's report is based on a review of all self-study materials previously submitted and the site visits at which the consultant had an opportunity to tour the physical facilities as well as to meet with appropriate faculty, College and University administrators, staff, and students.

DISCIPLINE ISSUES - ENTRY LEVEL DOCTOR OF PHARMACY PROGRAM

The debate to offer the entry level Doctor of Pharmacy as the sole professional degree in pharmacy education has its origin in 1948, when the American Council on Education recommended that the American Association of Colleges of Pharmacy and the American Council on Pharmaceutical Education take the necessary and initial steps for the development and establishment of a six-year program of education and training leading to the professional degree, Doctor of Pharmacy. In 1950, the University of Southern California became the first school to offer the Pharm.D. degree. In 1956, the University of California at San Francisco joined USC as the only two schools to offer the entry level Pharm.D. as their only professional pharmacy degrees. In the early 1970's several other schools converted to entry level programs.

In November, 1985, three consultants were commissioned to do a program review of the pharmacy program at the University of Florida and Florida A & M University. At that time they highly recommended discontinuing the B.S. in Pharmacy and initiating the entry level Pharm.D. to the Florida Board of Regents. This recommendation was not approved and both State supported programs have maintained both the B.S. and Pharm.D. programs. Maintaining both programs is consuming a great deal of resources and energy of the faculty and administration.

Since 1985, the momentum for all schools/colleges of pharmacy to convert to the entry level Pharm.D. program has gained support. On September 17, 1989, the American Council on

Pharmaceutical Education published its intent to revise the accreditation standards and guidelines for the entry level Pharm.D. programs (See Appendix B). As noted in the declaration of intent, "... the Council foresees the time when the accreditation standards will focus upon a doctor of pharmacy as the only professional degree program evaluated and accredited." (p. 2) It can be noted that the A.C.P.E effective date for the standards to have undergone all of the review process is June, 1997, with an effective date for the adoption of standards to be established based upon resource development, etc., perhaps as soon as July 1, 2000.

On November 22, 1991, the American Pharmaceutical Association, American Society of Hospital Pharmacists, and the National Association of Retail Druggists released a joint statement, supporting the move to the entry level Doctor of Pharmacy Degree. (See Appendix C). This statement was the consensus position of the nation's three largest pharmacy practitioner associations. Subsequently, the statement was endorsed by the American College of Apothecaries, the American Society of Consultant Pharmacists, the National Association of Boards of Pharmacy, the Academy of Students in Pharmacy, and the National Pharmaceutical association.

In July, 1991, the House of Delegates of the American Association of Colleges of Pharmacy voted to adopt the entry level Pharm.D. as the sole entry level professional degree. Since this vote, the A.A.C.P. has been developing various

programs to assist its member institutions to begin the planning and implementation of this program. (Appendix D)

The following is a status report of the conversion to the entry level Pharm.D. program for the various U.S. schools, and colleges of pharmacy. This data was provided by the A.A.C.P. (See Appendices E and F)

Schools Offering Pharm.D. Degree Only (25% -19 of 75 programs)

Samford University
University of Arizona
University of Arkansas
University of California at San Francisco
University of the Pacific
University of Southern California
Howard University
Mercer University
Idaho State University
University of Illinois at Chicago
Xavier University of Louisiana
University of Maryland
University of Michigan
Creighton University
University of Nebraska
Campbell University
North Dakota State University

South Dakota State University

University of Tennessee

Nova-Southeastern (beginning in Fall, 1995)

In addition, the University of Texas at Austin has expressed a desire to discontinue the bachelor's in Pharmacy and offer only an entry level Pharm.D.

From the most recent AACP data (Appendix E) it should be noted that 71% or 53 of the 75 schools and colleges offer the Post Baccalaureate Pharm.D. degree. From a recent survey, only nine schools have not made the decision to offer the Pharm.D. as the only entry-level degree and are not currently considering such a decision (Appendix F). These data clearly are indicative of the current trends in pharmacy education. It is also apparent that most or all of these institutions are in transition to the entry level Pharm.D. degree as the year 2000 rapidly approaches. However, this issue is not one of "keeping up with the Joneses" but about the two State Pharmacy programs in Florida remaining competitively viable for students. Even the current students at the University of Florida are opting for the entry level program with only 30% choosing the B.S. degree option. The proportion of students opting for the entry level Pharm.D. at Florida A & M University is increasing, and many of the B.S. students are planning to continue their education. The Board of Regents is well advised to move expeditiously to approve the deletion of the B.S. program and offer the entry level Pharm.D. as the sole professional degree for the two Florida Pharmacy programs.

UNIVERSITY REPORTS

ACADEMIC PROGRAMS AT THE UNIVERSITY OF FLORIDA

Degree Programs	Program Description
B.S. Pharmacy	A three-year program in the College of Pharmacy which requires two years of pre-pharmacy post-secondary education preparation. The program is designed to prepare students to become pharmacists.
Entry Level Doctor of Pharmacy (Pharm.D.)	A four-year program in the College of Pharmacy which requires two years of pre-pharmacy postsecondary education preparation. The program is designed to prepare students to become pharmacists.
B.S. Pharmacological Sciences	A four-year honors program, the last two years of which are in the College of Pharmacy. The program is designed to prepare students to enter graduate level academic programs in the pharmaceutical sciences or professional programs such as medicine and dentistry. The program does not prepare students for licensure as pharmacists.
Non-traditional Pharm.D.	A post-baccalaureate professional program designed for baccalaureate-prepared pharmacists to upgrade their education to a Pharm.D. The program is provided on the main campus.
External Pharm.D. (proposed, in planning)	Similar to the non-traditional Pharm.D., but the program is delivered at sites external to the main campus.

M.S. and Ph.D. programs in Pharmaceutical Sciences (with specializations in medicinal chemistry, pharmacodynamics, and pharmacy, which consists of tracks in pharmaceutics and pharmacy health care administration)	Non-professional graduate degree programs designed to prepare students for academic or research careers in pharmaceutical sciences.

Baccalaureate in Pharmacy

The baccalaureate in pharmacy program is overloaded with an excessive number of credit hours. The College is urged to discontinue this program as soon as possible. Planning to begin an orderly phase out of the B.S. program should take into account students already in the pipeline. A period of 3-4 years should be sufficient to phase out the B.S. program. The reason for this recommendation is that maintenance of the two professional programs is consuming energy, detracting from overall potential and effectiveness of the College and faculty.

Entry Level Doctor of Pharmacy Program

Overall, the entry level Pharm.D. program is of high quality. However, the program would be much improved if the faculty could concentrate on refining this one professional program. The B.S. program consumes limited resources and is serving to some degree as a distractor from the entry level Pharm.D. program. Currently, the College is running an entry level Pharm.D. program with the students having the option to complete the B.S. program instead. The students can move back

and forth between the Pharm.D. and the B.S. in Pharmacy. The B.S. and Pharm.D. competencies are not well differentiated. There appears to be little difference in the first two years of the professional curriculum. The clerkships are also shared by both groups of students, although there is more rigor and four times the amount of clerkship time for the entry level Pharm.D. students.

Curricular issues that should be addressed include a review of the number of credits and emphasis on therapeutics and a review of the perceived redundancy of some of the management/pharmacy administration courses. There seems to be confusion between the Curriculum Committee and the Pharm.D. Task Force. It is recommended that there be more coordination of the two committees as they develop and refine the Pharm.D. programs.

Post Baccalaureate Doctor of Pharmacy Program

The external/non-traditional Pharm.D. program is held to 15 students at any given time. The program seems to be developing some innovative courses. Credit is given for some prior relevant professional practice experiences. The College is encouraged to continue to expand this program as a pathway for B.S. degree pharmacists to update their credentials and practice skills.

Bachelor of Science in Pharmacological Sciences - Honors Program

This program was designed to be a feeder program for the

M.S./Ph.D. in Pharmaceutical Sciences program when the Pharm.D. program was initiated. Unfortunately, this program has not been widely accepted by students. Word is out among the undergraduate science students at the University of Florida that the program is difficult and the student might as well get a pharmacy professional degree (either the B.S. in Pharmacy or the Pharm.D.). To date there have been only five graduates of the B.S. in Pharmacological Sciences, none of whom have gone on to graduate studies. The College plans to put a hold on admissions into this program until the future of the B.S. in Pharmacy is decided. It is highly recommended that this program be discontinued as it has not proven to be viable.

GRADUATE PROGRAMS

The College offers graduate M.S. and Ph.D. programs in Pharmacy, with specializations in medicinal chemistry, pharmacodynamics, and pharmacy (which consists of tracks in pharmaceutics and pharmacy health care administration.

Medicinal Chemistry

This is a very strong and productive program. The faculty members have significant external support which supports students' research projects for their thesis work. Several faculty in this department serve on NIH Study Sections. They have recently had two drugs developed in the Department that have received FDA approval for human testing. A major strength for

the graduate students is that there are overlapping interests, e.g. cancer research.

Pharmacodynamics

A very strong graduate program. The faculty is very diverse and there are several common research themes, e.g., aging, hypertension, and drug abuse. There is significant collaboration with faculty members in Physiology, Anatomy and Pharmacology Departments in the Medical School. The department is encouraged to secure additional external research funding.

Pharmaceutics

The Pharmaceutics graduate program is relatively good. However, the Department is strongly encouraged to develop an academic core for the major concentration area. Currently, the faculty in the Department number only four individuals, but the Department is recruiting for two assistant or associate professors. An eminent scholar chair in the Department remains unfilled due to insufficient space (visiting scholars have been hired until a permanent hire can be made). Failure to hire these additional faculty in the department, given the heavy professional curriculum teaching loads, could lead to erosion of the quality of the graduate program. The Department is also encouraged to increase their external research support.

Pharmacy Health Care Administration

Over the last 5 years, 75% of the faculty have turned over. This has resulted in a "defacto" new Department. The Department has developed a Center for Research in Pharmaceutical Care which has a national reputation. There are significant research opportunities for the graduate students, as the Department has a major focus on preventing drug-related illnesses. There is a great deal of collaboration with faculty in the Pharmacy Practice Department. Currently, 80% of the funding in the Department is from the pharmaceutical industry. The Department is encouraged to increase their external funding from other sources, such as federal grants. A noted weakness is the Department's inability to increase graduate student stipends. This is especially relevant since most of their graduate students are pharmacists who can command significant salaries; low stipends increase the difficulty in recruiting graduate students.

Overall Assessment of Graduate Programs

Generally, the four graduate programs are of high quality. The faculty is generally very strong and productive. The area of Pharmaceutics needs strengthening and the College in general should begin to recruit some new faculty; it was noted that in some departments no new faculty have been hired in 10 years. Being located in an academic health science center has major advantages for collaboration with faculty in the Medical School and offers research opportunities for the graduate students and

faculty. The students are generally of high quality. There are low numbers of U.S. born students and minorities in the program. Increased efforts need to be made to increase minorities, women, and U.S. born students.

A major problem noted by the graduate students is the decrease/shortfall in tuition waivers being caused by State budget reductions. The shortage of space for graduate students, especially in the basic science laboratories, is acute. The space is not only inadequate for the students to conduct their research, but is hazardous in some cases due to improper fume hoods, outdated and deteriorated laboratory benches, and safety equipment. Graduate students generally have no office other than in the laboratories.

No salary increases for the graduate faculty over the last three years could result in losses which could negatively affect the quality of the graduate programs. Efforts need to be made to restore the competitive salary structure with peer research intensive colleges/schools of pharmacy.

APPROPRIATE COMMUNITY COLLEGE ARTICULATION

The community college articulation agreement was reviewed with the Associate Dean for Student Affairs, and appears to be working well as a source for transfer students to the professional programs. According to the procedures outlined, community college Associate of Arts (A.A.) transfer students are given the same opportunity to enroll in the limited access

pharmacy program as native students. Admission is very competitive and the criteria include G.P.A., Pharmacy College Admissions Test (P.C.A.T.) scores, letters of recommendation, essays, and personal profile. Based on these criteria, a higher proportion of UF native student applicants than A.A. transfer applicants qualify for admission into the program.

LIMITED ACCESS PROGRAM

Given the limited resources, especially the clerkship sites, classroom, laboratory space, equipment and faculty, it is recommended that the professional programs remain limited access programs.

STUDENTS

Professional Students

The College has a pool of well qualified student applicants that is expected to increase. The quality of students has continued to increase as measured by increasing GPA and PCAT scores, decreasing attrition rates and decreasing number of students on probation. For the faculty and facilities the current admission ceiling of 105 per class is very appropriate.

The first time passage rate on the NABPLEX pharmacy licensure exam is approximately 99% for the most recent exams. This is an index of a quality program, and the faculty and students should be commended.

The student participation in professional organizations, community, and social organizations is excellent. There was significant evidence of a very active student body and the faculty advisors are to be commended for nurturing this high level of student activities.

Student advising is perceived to be well done by the professional students. The students were highly complimentary of the Associate Dean for Student Affairs and his staff for being very student and "customer service" oriented. The faculty advising system also received high marks from the students. The students also felt that the University and College of Pharmacy Student Affairs were very effective in Financial Aid counseling and service.

By the college's own admission, as reflected in the Institutional Self-Study, the enrollment of African American and Hispanic students is woefully low; both less than 5%. The College is encouraged to increase its outreach efforts to recruit minority students into the program.

The clinical faculty and facilities for supporting the College's professional programs are viewed to be excellent resources. Capacity building is well under way to accommodate the Doctor of Pharmacy program as the College's only professional program. The Drug Information Center is an excellent "hands on" experience for clerkship students. The experiential components offered at Shands Hospital, Tampa and Jacksonville are outstanding training opportunities. There is a very large cadre

of adjunct preceptor/faculty that do an excellent job of training professional students. The Director of the Experiential Training Program is to be especially complimented for an outstanding job of not just being a "scheduler", but taking the time to get to know the students and match up their interests, family status, and experience with the appropriate preceptors and sites.

Graduate Students

The Graduate Student Council seems to be active and interact with other graduate students outside the Health Science Center.

The graduate students raised several issues that were of major concern to them: (1)Lack of space in laboratories and lack of office space for graduate students; (2)Conditions in the laboratories which bordered on being unsafe due to overcrowding, outdated equipment and inadequate safety equipment; (3) Tighter State of Florida residency requirements which make it more difficult for graduate students to qualify for in-state tuition; (4) State budget shortfalls which have resulted in reduction in tuition waivers; (5) Difficulty in obtaining support to attend and present their work at scientific meetings; (6) Lack of adequate health insurance coverage for the graduate students. Failure to address some of the most serious of these, such as financial aid, could result in the University of Florida being unable to compete for high quality graduate students.

FACULTY

In general, the faculty is of high quality as measured by research publications, scholarship, external research and national reputation. The quality of their teaching is held in high regard by both the professional and graduate students. Generally, the faculty are available for both groups of students for teaching, guiding graduate research and academic advising. Faculty numbers appear to be adequate to support the College's programs, provided existing vacancies are filled (authorized and funded appropriately). Continued review, however, should occur as professional and graduate programs continue to evolve.

The discontent of a small group of faculty could have an erosive effect on the morale of the faculty in general and could have a negative effect on the quality of the academic program ultimately. This is a serious concern which needs to be resolved by the University administration.

There needs to be more support for an organized program for faculty development. This program should include both teaching and research/scholarship. Emphasis should be placed on developing collegiality with a focus more on the College as a whole versus the current orientation which seems to be more on the individual and his/her department.

Diversity issues should be considered in hiring faculty. There is a notable shortage of ethnic minorities currently on the faculty. Efforts also need to be made to increase the diversity of the faculty in administrative positions and committee

assignments and other areas of responsibility.

State budgetary restrictions resulting in three years of no salary increases has moved the average faculty member's salary from the 75th percentile of the AACP Salary Survey to a current level of well below the 50th percentile. The modest increase given this academic year has had some minimal effect on the morale of the faculty. Efforts are encouraged to investigate innovative ways the University can regain the competitive edge in salaries among the peer research intensive colleges/schools of pharmacy with which the University of Florida competes.

FACILITIES AND RESOURCES

Laboratory and office space for the faculty is woefully inadequate. The research laboratories are so overcrowded and outdated that they pose a borderline safety threat to the faculty, staff and students. A fully funded eminent scholar's chair lies vacant because of inadequate space. The College has launched a campaign to raise approximately $5.0 million to construct a new building in the Health Sciences Center complex. The University Administration is strongly urged to do what it can to identify additional laboratory, classroom and office space for the College of Pharmacy faculty on the campus while the capital campaign is underway. Even some temporary space is greatly needed.

The College of Pharmacy uses a common core of classrooms and teaching laboratories. The College is in much need of a

dedicated space for a pharmacy practice/simulation laboratory (model pharmacy).

The College is fortunate to be located in the academic health sciences center and Shands teaching hospital. These clinical facilities and the ones located in Tampa, Jacksonville, Miami and Gainesville are outstanding clinical facilities to support the experiential component of the professional academic program.

The library is a shared facility within the academic health sciences center. It has good capacity, heavy use, and is fully computerized. There is a good working relationship with the staff and the College of Pharmacy. Students have access to a computer assisted instruction laboratory housed in the library.

The College is in dire need of state-of-the-art laboratory equipment. However, the current laboratories are so overcrowded, there is inadequate space to house some of the new equipment if there were resources to purchase it. Efforts need to be made to obtain these much-needed modern laboratory benches and supporting research equipment.

There appears to be adequate numbers of support personnel. The office of student affairs lost some staff during budgetary recessions and are being reconsidered for restoration of the staff positions (temporary staff has been added recently). It is highly recommended that these positions be converted to permanent positions to support this vital part of the college's operation.

RECOMMENDATIONS

1. Discontinue the baccalaureate in Pharmacy, making the Pharm.D. the sole entry-level professional program.
2. Discontinue the baccalaureate in Pharmacological Sciences.
3. Review the curriculum in relation to the number of credits and need for additional emphasis on therapeutics, and redundancy (perceived by students) of some of the management/pharmacy administration courses.
4. Pharmaceutics, and the College in general, need to recruit some new faculty.
5. Efforts should be made to increase diversity among both students and faculty. There is also a need to increase the diversity of faculty in administrative positions and committee assignments.
6. The low morale and discontent among some faculty needs to be addressed before it affects the entire College.
7. Faculty salaries are considerably below those of peer research intensive colleges/schools of pharmacy, and need to be remedied to remain competitive.
8. Laboratory and office space is urgently needed.
9. There is a dire need for laboratory equipment. Out-moded laboratory benches and supporting research equipment need to be replaced.

ACADEMIC PROGRAMS AT FLORIDA A & M UNIVERSITY

Degree Programs	Program Description
B.S. Pharmacy	A three-year program in the College of Pharmacy which requires two years of pre-pharmacy post-secondary education preparation. The program is designed to prepare students to become pharmacists.
Entry Level Doctor of Pharmacy	A four-year program in the college of pharmacy which requires two years of pre-pharmacy post-secondary education preparation. The program is designed to prepare students to become pharmacists.
Non-traditional Pharm.D.	A post-baccalaureate professional program designed for baccalaureate prepared pharmacists to upgrade their education to upgrade their B.S. degree to a Pharm.D. This program was being offered off campus. However, a reduction in State funding has resulted in this program being discontinued.
M.S. and Ph.D. programs in Pharmaceutical Sciences (with specializations in Pharmacology/Toxicology, Environmental Toxicology, Pharmaceutics, Medicinal Chemistry)	Non-professional graduate degree programs designed to prepare students for academic or research careers in pharmaceutical science.

Baccalaureate in Pharmacy

The baccalaureate in pharmacy curriculum was revised in

1988, and implemented in 1989. While the program seems to be of relatively high quality, the College is urged to discontinue this program as soon as possible. Planning to begin an orderly phase out of the B.S. program should take into account students already in the pipeline. A period of 3-4 years should be sufficient to phase out the B.S. program. The reason for this recommendation is that maintenance of the two professional programs is consuming energy, detracting from overall potential and effectiveness of the college and faculty. Interestingly enough, it should be noted that the current B.S. program is an 11 semester program; the entry level Pharm.D. program could require only one additional semester[1]. Another interesting observation: of the five B.S. students interviewed during the review, every one of them planned to either complete the Pharm.D. or planned to enter medical school. These students also stated that many of their classmates in the B.S. program had similar plans.

Entry Level Doctor of Pharmacy Program

The Doctor of Pharmacy Program was revised in 1988 and implemented in 1989. The faculty is in the process of studying needed changes and curricular designs. The new direction for pharmacy practice -- "pharmaceutical care" is being incorporated

[1]It is possible to complete the BS program in 10 semesters, with additional hours of unsupervised externship as specified by the licensure Board. However, it takes less time to fulfill the licensure requirement with a supervised externship in the eleventh semester. Therefore most students select this option. The current PharmD is a 13 semester program, but it may be possible to streamline it to a 12 semester program.

in the revisions, along with updating outcome objectives and the curriculum mission.

Currently the College of Pharmacy is running an entry level Pharm.D. program, with the B.S. students having the option to complete the B.S. degree. Students have to make the decision in their second professional year (4th year in 0-5 program). The entry level Pharm.D. program is currently a 13 semester program.

While it is admirable that the faculty is currently engaged in updating the entry level Pharm.D. program, it is very energy-consuming to update the program while having extreme limitations placed on college resources to maintain both professional programs. This is especially true in cases where the college has to secure high quality experiential training sites (clerkship/externship) for both B.S. and Pharm.D. students both in Tallahassee and Miami.

Non-traditional Pharm.D. Program

Over the last five years the College of Pharmacy developed and implemented a non-traditional Pharm.D. program in Miami for B.S. degree working pharmacists to obtain the Pharm.D. degree without coming to the Tallahassee campus. This program has been discontinued due to State of Florida budgetary constraints. Currently there are two students completing the program. After their graduation, there will be no new admissions to the program.

GRADUATE PROGRAMS

The college offers graduate M.S. and Ph.D. programs in Pharmaceutical Sciences. Following is the history of these offerings:

1978 - M.S. Pharmacology/Toxicology

1985 - Ph.D. Pharmacology/Toxicology

1989 - Ph.D. Medicinal Chemistry

1990 - Ph.D. Environmental Toxicology

1993 - M.S. Pharmaceutics (with track into Ph.D. at University of Florida)

Pharmacology/Toxicology

This program was the first graduate program at FAMU, and is very strong. Faculty in the program are generally well funded. Many of the faculty have national and international scientific reputations. Some of their pioneering work in Chronopharmacology has been internationally recognized. This program has by far the largest enrollment of all of the graduate programs with 11 students in the M.S. program and 18 students in the Ph.D. program. There is an adequate number of faculty with research experience and external funding to support this number of graduate students, including support for the students' dissertation projects.

Environmental Toxicology

This is the most recent Ph.D. program. It was initiated

with external support from the Agency for Toxic Substances and Disease Registry (ATSDR). There are currently 9 students in this program. Their first student to complete the Ph.D. is scheduled to defend his dissertation within the next month. While this is an important area for offering graduate level training, the level of faculty is inadequate. There are currently only two full time faculty in this area. There should be at least one additional faculty person in this area. However, it should be noted that the two faculty members working in the department are very strong and have excellent reputations in the Environmental Toxicology field. The College of Pharmacy is to be complimented for implementing a graduate program in this area which is relatively new and where there is a severe shortage of trained scientists, especially minorities.

Pharmaceutics

This program was initiated in 1993 with the M.S. degree program. The students can track into the University of Florida College of Pharmacy to complete the Ph.D. There are currently two students in the Ph.D. track and one student in the M.S. program. There are currently two faculty in the Pharmaceutics Department. However, with their heavy teaching loads in the professional program, there needs to be at least two additional faculty in this area to adequately staff the graduate program as student enrollments increase.

Medicinal Chemistry

The Medicinal Chemistry program currently has 6 students in the M.S. program and 3 students in the Ph.D. program. The medicinal chemistry faculty are very strong researchers. The department is well known for its work in developing non-steroidal anti-inflammatory drugs. The faculty have several patents for some of the compounds that have been discovered in their laboratories. There is a significant level of external funding; adequate to support the graduate students. The size of the medicinal faculty is also adequate for the number of graduate students.

Overall Assessment of Graduate Programs

Since 1978 FAMU has developed very impressive graduate programs. All of the programs are of very high quality, particularly the Pharmacology/Toxicology and Environmental Toxicology programs. External funding of the graduate faculty is quite impressive, with approximately $5 million for this academic year. The faculty have been equally successful in obtaining external support for the graduate student stipends and research support from MBRS program, McKnight Foundation, drug companies, ATSDR. Students also get modest funding for books and travel to professional meetings.

There seems to be excellent support from drug companies and Federal national laboratories, i.e. Oak Ridge, NCTR and other DOE labs, to provide research opportunities for graduate students to

do research in their facilities. In some instances, the students actually perform their dissertation research projects in cooperation with these scientists. This is a real strength, in that the student can see the "real world" application of their work and it helps the students to get permanent positions of employment and/or post-doctoral positions because they are already known to these organizations.

The graduate faculty are very enthusiastic and proud of the growth in quality of the programs and quality of students they are attracting. The faculty is adequate in size except that additional faculty are needed in Pharmaceutics and Environmental Toxicology. There needs to be a dedicated Graduate Administrator or office; given the size of the program, there needs to more administrative support for the graduate students.

In 1991, FAMU graduated a record number of 5 Ph.D.'s which was twice as many African-American Ph.D.'s in the Pharmaceutical Sciences than all of the other U.S. colleges/schools of pharmacy combined. For this accomplishment, FAMU deserves a very special recognition. The current enrollment of 49 students seems to be at capacity especially in Pharmacology/Toxicology. Given the limitations on laboratory, office space, and current faculty numbers, it might be overly ambitious to plan to grow the graduate program to 100 students in the next 5 years (as contemplated by the University). The graduate program is of high quality and has gained a national reputation. Having more graduate students than they can adequately support could cause

erosion in the quality of the programs.

APPROPRIATE COMMUNITY COLLEGE ARTICULATION

The community college articulation agreement was reviewed with the Director of Student Affairs and appears to be working well as a source for transfer students to the professional programs. According to the procedures outlined, community college Associate of Arts (A.A.) transfer students are given the same opportunity to enroll in the limited access pharmacy program as native students. Admission is very competitive and the criteria include G.P.A., letters of recommendation, personal interview, personal profile, etc. Based on these criteria, a higher proportion of FAMU native student applicants than A.A. transfer applicants qualify for admission into the program.

LIMITED ACCESS PROGRAM

Given the limited resources, especially the clerkship sites, classrooms, laboratory space, equipment and faculty, it is recommended that the professional programs remain limited access programs.

STUDENTS

Professional Students

A gain for the College has been the attractiveness of its professional program, as demonstrated by the increased student enrollment. A critical need for the College is to effectively

manage enrollments in accord with available resources and academic planning. The almost doubling of students has been accompanied by only about a one-third increase (upon filling vacancies) in faculty, no new physical facilities in place, and new and critical challenges to further develop existing clinical teaching facilities, and expand to new clinical facilities. Moreover, the existent and contemplated changes in pharmacy practice require expansion of scope so as to provide community pharmacy/ambulatory care clerkships. The divided campus, limited resources, and curricular revisions require a professional program focus, in keeping with the College's goal for the doctor of pharmacy program as the sole professional program offering. Furthermore, an immediate need is to build quickly for the increased enrollment in the doctor of pharmacy curriculum, prior to the planned phase-out of the baccalaureate in pharmacy curriculum.

The College graduates performance on the NABPLEX first time passage rate has increased dramatically during the last five years. In 1988, the College graduates passing rate (for first time takers) was almost 31% below the national average. In 1994, the College graduates passing rate (for first time takers) was about 8% above the national average. This improvement in performance of the graduates indicates that the College is proceeding in the right direction in preparing its graduates to practice pharmacy. This is an index of a quality program, and the faculty and students should be commended.

Both the B.S. and Pharm.D. students generally felt that the faculty were very dedicated and committed. However, the clinical pharmacy faculty at the Tallahasseee campus were perceived to be very much overloaded with classroom instruction and clerkships and spread too "thin." They were perceived to be readily accessible given their limited available time. The students appreciate the comprehensive exam, as this has proven to be an excellent preparation for the NABPLEX exam. The Professional Readiness Course was well liked by the students as it seems to prepare them in communication skills for professional presentations. The one problem noted dealt with the University Financial Aid Office's delay in processing loan checks. The Miami Pharm.D. students voiced a strong desire to have a student affairs staff person based in Miami to assist them with their financial aid, housing and other administrative problems since they are so far from the Tallahassee campus.

Overall the students (B.S. and Pharm.D.) felt they were getting a very high quality, competitive education. They had chosen FAMU because of its excellent reputation. Of special note, of the five B.S. students that met with the BOR team, all five of them intended to continue their education to complete the Pharm.D. or go on to medical school (in the case of two of them).

Graduate Students

The BOR team met with approximately 30 graduate students, which was a majority of the currently enrolled students. The

following were some strengths of the graduate programs from these students perspectives: (1) course content is very relevant and research oriented; (2) curriculum is very flexible to fit the background of individual students; (3) faculty are perceived to be very helpful and supportive of graduate students; (4) summer research internships at large pharmaceutical companies are considered very positive; (5) the level of personal involvement of the graduate faculty with students is high; (6) the weekly graduate seminars are well liked by students; (7) students are required to attend national meetings, must make at least two presentations and must publish two papers before completing the program; (8) the cooperation between the various laboratories is very positive.

Some areas where the students felt there needs to be improvement included the following: (1) additional laboratory, office, study space; (2) additional research equipment especially to do molecular biology research; (3) the need to alleviate major problems with the processing of their financial aid packages, and not knowing what financial aid they will be getting from one semester to the next; (4) the Pharmacology course for the graduate students is the same course as for the pharmacy professional students, with too much emphasis on the pharmacy practitioner.

Overall, with the excellent reputation of the graduate program, FAMU has been able to attract some very competitive and high quality graduate students. On average it takes most

students approximately five years to complete the Ph.D. program, which indicates the students can get through the programs with minimum difficulty.

FACULTY

In general, the faculty is of high quality as measured by research publications, scholarship, external research, national, and international reputations. Several of the graduate faculty in Toxicology and Medicinal Chemistry are well known for their outstanding contribution to the science in their discipline. One faculty member was recently cited for having published 95 papers which ranks him as the most published professor at any HBCU in the country. The basic science faculty is senior, with very little turnover. They have brought in nearly $5 million for the current year in external research funding.

Additional faculty resources will be needed, particularly in pharmaceutics (if initiating a Ph.D.), environmental toxicology, pharmacy administration, and pharmacy practice. The pharmacy practice faculty, especially in Tallahassee, appear overloaded. Faculty appointments in the pharmacy practice area will need to give consideration to new configurations, such as co-funded/co-staffed positions with clinical affiliates. A new cadre of voluntary faculty will need to be developed in keeping with adequate College support systems.

FACILITIES AND RESOURCES

The College has decidedly outgrown its physical facilities at Tallahassee. The enrollment growth and the successes of the graduate and research programs have consumed available space. Classroom sizes are inadequate and crowding exists; sectioning of lectures, and the double lecturing aggravates the teaching loads. The observed circumstances will be worsened with greater deployment of new teaching tactics. Both short-term (additional classrooms and laboratory space) measures and longer-term (new construction) measures are needed to address this major problem.

The library is well equipped and resources are adequate. However, the facility is overcrowded and there is inadequate space for study carrels and reference materials.

The clinical facilities provide a range of practice experiences and support the curricula. The critical need, in view of the increased numbers of students, is to expand clinical sites in number and in scope. This will involve in-depth development at the Miami and Tallahassee sites, and controlled growth and development at other regional centers. Clinical instruction will depend, increasingly, on support from voluntary faculty. The Miami campus is an excellent base for clinical instruction; additional space should be planned for and stabilized at this site.

Professional/clerical/administrative support staff will be needed to keep pace with program, faculty and student growth. New teaching and learning strategies and tactics such as small

group instruction, problem solving case studies, and educational technologies, including interactive television, will place new demands on faculty and staff needs.

RECOMMENDATIONS

1. Discontinue the baccalaureate in Pharmacy, making the Pharm.D. the sole entry-level professional program.
2. Laboratory and office space is urgently needed.
3. Implement an enrollment management program for the B.S. and Pharm.D. in accord with available resources and academic planning.
4. Implement an enrollment management program for the graduate program. It appears that the current enrolment of 49 students is close to the capacity of laboratory and office space for graduate students.
5. Improve financial aid administration for both the professional and graduate students.
6. Fill faculty vacancies as soon as possible, especially in Pharmacy Administration, Pharmacy Practice (particularly in Tallahassee), and Pharmaceutics. Additional faculty are also needed in environmental toxicology.
7. Exercise caution in expanding the M.S. program in Pharmaceutics to a Ph.D. until a critical mass of graduate faculty is reached. Plans to initiate a Ph.D. program in Pharmacy Administration should be deferred

until all of the current graduate programs are solidified and a decision is made on the entry level Pharm.D. program.

8. An administrative position needs to be established to administer the graduate program.

Appendices

Appendix A

CURRICULUM VITAE

NAME: Marcellus Grace
ADDRESS: 5743 Louis Prima Drive West
New Orleans, LA 70128
(504) 242-1159

BUSINESS: College of Pharmacy
Xavier University
of Louisiana
New Orleans, LA 70125
Work: (504) 483-7421
Fax: (504) 488-3108

MARITAL STATUS: Married, 3 children

DATE OF BIRTH: October 17, 1947, U.S. Citizenship

PLACE OF BIRTH: Selma, Alabama

EDUCATION:

B.S. Pharmacy, Xavier University of Louisiana, New Orleans, Louisiana, May 1971.

M.S. Hospital Pharmacy, University of Minnesota, Minneapolis, Minnesota, March 1975.

Ph.D. Pharmacy Administration, University of Minnesota, Minneapolis, Minnesota, December 1976.

PROFESSIONAL EXPERIENCE:

Dean and Professor of Pharmacy Administration, College of Pharmacy, Xavier University of Louisiana, New Orleans, Louisiana, January 1983 - Continuing (Promoted to Full Professor July 1989, Tenured June 1990).

Chairman, Department of Pharmacy Administration, Howard University, March 1982 - December 1982.

Associate Professor of Pharmacy Administration (Tenured), College of Pharmacy and Pharmacal Sciences, Howard University, March 1982 - December 1982.

Interim Chairman, Department of Pharmacy Practice, Howard University, April 1981 - July 1981.

Assistant Dean for Service Education, College of Pharmacy and Pharmacal Sciences, Howard University, January 1979 - March 1982.

Associate Professor of Pharmacy Practice, Howard University, January 1979 - March 1982. (Tenured January 1982).

Assistant Professor, Clinical Pharmacy and Director of Professional Experience Program, College of Pharmacy, Xavier University of Louisiana, New Orleans, Louisiana, January 1976 - December 1978.

U.S. Naval Reserve Officer, Medical Service Corps, April 1976 - Continuing.

Pharmacy Consultant, Tulane Medical Center Hospital and Clinic, 1415 Tulane Avenue, New Orleans, Louisiana, May 1976 - May 1977.

Director of Pharmacy Services, Tulane Medical Center Hospital and Clinic, 1415 Tulane Avenue, New Orleans, Louisiana, September 1976 - May 1977.

Assistant Director of Pharmacy Services, Bethesda Hospitals, 619 Oak Street, Cincinnati, Ohio, March - December 1975.

PROFESSIONAL EXPERIENCE (CONT'D):

Research Assistant (Dr. Hugh F. Kabat): College of Pharmacy University of Minnesota, September 1974 - May 1975.

Teaching Assistant, College of Pharmacy, University of Minnesota, September 1974 - June 1974.

Pharmacist (Community), part-time, Walgreens Drug, Midway Shopping Center, University Avenue, St. Paul, Minnesota, January 1974 - October 1974.
Staff Pharmacist (Hospital), part-time, Methodist Hospital, 6500 Excelsior Blvd., St. Louis Park, Minnesota, April 1974 - February 1975.

Pharmacist (Community), Thrifty Drug Stores Co., Inc., Rodeo Road & LaBrea, Los Angeles, California, July - August 1973.

Staff Pharmacist (Hospital), U.S. Public Health Service Hospital, 77 Warren Street, Boston (Brighton), Massachusetts July 1972 - June 1973.

Pharmacy Resident, American Society of Hospital Pharmacists (ASHP) Accredited, U.S. Public Health Service Hospital, 3100 Wyman Park Drive, Baltimore, Maryland, July 1971 - July 1972.

Pharmacy Intern, 1968 - 1970:

(a) Hackett's Pharmacy, 1901 Leonidas Street, New Orleans, Louisiana.

(b) Thrifty Drug Stores Co., Inc., #129, corner of Vermont & Sunset Blvd., Los Angeles, California.

(c) U.S. Public Health Service Hospital (COSTEP Program), 210 State Street, New Orleans, Louisiana.

SPECIAL TRAINING:

Residency in Hospital Pharmacy, American Society of Hospital Pharmacists (ASHP) Accredited, U.S. Public Health Service Hospital, Baltimore, Maryland, Completed July 1972.

LICENSURE (R.PH.):

Louisiana	#9940	1971
California	#27622	1972
Minnesota	#11844	1974
Ohio	#03-11-1157	1975
District of Columbia	#1934-B	1979

SCHOLARSHIPS AND HONORS:

Eli Lilly Achievement Award for Ethics, Scholarship, and Leadership, May 1971.

Certificate of Recognition award by the Student American Pharmaceutical Association for outstanding services to the student APhA Chapter of Xavier University, May 1971.

Lawrence F. Ferring Scholarship for academic achievement, 1966, 1967, 1968.

Student Government Pin for activity and interest in the Student Government Association of Xavier University, May 1970.

Recipient of the National Fellowships Fund Graduate Fellowship for Black Americans, 1975 - 1976.

SCHOLARSHIPS AND HONORS (CONT'D)

Rho Chi Honor Society (Inducted May 1977).

Certificate of Fellowship, Louisiana Society of Hospital Pharmacists, March 1978.

Outstanding Young Men of American Award, U.S. Jaycees, 1979 and 1980.

Certificate of Appreciation, NABPLEX Review Committee, National Association of Boards of Pharmacy, October 1983.

Listed in Who's Who Among Black Americans, 1985, 1991, 1993.

Listed in Who's Who in the South and Southwest, 1992.

Listed in American Men & Women of Science, 1992.

Member, The New York Academy of Sciences, 1991 - Continuing

POSITIONS AND OFFICES:

Chi Delta Mu Professional Pharmacy Fraternity, Tau Chapter, Secretary, 1969 - 1970, Vice President, 1970 - 1971.

Student American Pharmaceutical Association, President, 1970 - 1971, Xavier University Chapter.

Xavier University Student Government, Vice President, 1970.

Member of American Association of Colleges of Pharmacy Subcommittee on Clerkship and Externship Programs, 1976 - 1978.

Member of American Association of Colleges of Pharmacy Committee on By-Laws, 1978 - 1979.

Member of NABPLEX Review Committee, National Association of Boards of Pharmacy, 1978 - 1983.

Faculty Advisor - Student National Pharmaceutical Association, Xavier University Chapter, 1976 - 1978.

Faculty Advisor - Freshman Class, 1976 - 1977, Sophomore Class, 1977 - 1978, Xavier University.

Faculty Advisor - Xi Sigma Chapter, Xavier University; Omega Psi Phi Fraternity, Inc., 1976 - 1978.

Chairman - Compliance Committee, Orleans Parish Coordinating Council, Louisiana High Blood Pressure Control Program, March 1978 - December 1978.

Vice-President - Orleans Parish Coordinating Council for High Blood Pressure Control, May 1977 - December 1978.

Member of Health and Organizational Affairs Committee of the Section of Teachers of Pharmacy Administration of the American Association of Colleges of Pharmacy, 1979 - 1980.

Member of the Council on Education Affairs, American Society of Hospital Pharmacists, 1980 - 1982.

Member of the National High Blood Pressure Education Program Consultant/Speaker Roster, August 1979 - Continuing.

Program Committee Chairman, District of Columbia Society of Hospital Pharmacists, 1980 - 1981.

POSITIONS AND OFFICES (CONT'D)

Chairman, Task Force on Supportive Personnel, District of Columbia Society of Hospital Pharmacists, 1980 - 1981.

Chairman, Health and Organizational Affairs Committee of the Section of Teachers of Pharmacy Administration of the American Association of Colleges of Pharmacy, 1980 - 1982.

President, District of Columbia Society of Hospital Pharmacists, 1982 - 1983.

Faculty Advisor, Beta Sigma Chapter - Rho Chi and Student National Pharmaceutical Association, Howard University, 1981 - December 1982.

Secretary, Section of Teacher of Pharmacy Administration, American Association of Colleges of Pharmacy, 1983 - 1986.

Member, Distinguished Pharmacy Educator Award Committee, American Association of Colleges of Pharmacy, 1983 - 1984.

Member, Institutional Pharmacy Affairs Committee, Louisiana Pharmacists Association, 1983 - 1984.

Member, Board of Directors New Orleans Historical Pharmacy, 1983 - Continuing.

Member, Distinguished Educator Award Committee, American Association of Colleges of Pharmacy, 1983 - 1984.

Member, Search Committee, American Association of Colleges of Pharmacy Executive Director, May - July 1984.

Student - Practitioner Achievement Awards Committee, Association of Black Hospital Pharmacists, 1984 - 1985.

Member, American Pharmaceutical Association Policy Committee on Educational Affairs, 1984 - 1985.
Member, Program Committee, Section of Teachers of Pharmacy Administration, American Association of Colleges of Pharmacy, 1983 - 1985.

Secretary-Treasurer, Association of Minority Health Professions Schools, 1985 - 1987.

Member, Accreditation Issues Committee, American Association of Colleges of Pharmacy, 1984 - 1986.

Member, Institutional Research Committee, American Association of Colleges of Pharmacy, 1985 - 1986.

President, Association of Minority Health Professions Schools, 1987 - 1989.

Chairman, Reference Committee on Educational Affairs, American Pharmaceutical Association, 1987 - 1988.

Member, Board of Directors National Center for the Advancement of Blacks in the Health Professions, 1988 - Continuing.

New Orleans, Regional Chairman, Louisiana Pharmacists Association, 1988 - 1989.

Chairman, Resolutions Committee, American Association of Colleges of Pharmacy, 1988 - 1989.

President and Chairman of the Board, Minority Health Professions Foundation, 1989 - 1991.

Member, Board of Directors, The Foundation of Pharmacists & Corporate American For AIDS Education, 1989 - Continuing.

Member, Board of Trustees, St. Thomas Health Services, March 1990 - Continuing.

POSITIONS AND OFFICES (CONT'D)

Member, Advisory Council of the National Institutes of Health, National Heart, Lung and Blood Institute July 1990 to October 31, 1993.

Chair, Pharmacy Panel, Pew Health Professions Commission, 1991-1992.

Member, Expert Advisory Panel on International Health, United States Pharmacopeial Convention, Inc. 1990 - 1995.

Member, Board of Directors, American Association of Colleges of Pharmacy, 1992-1994.

Member, Walgreen Pharmacy Advisory Council, 1993-1996.

Member, Board of Directors, International Environmental Institute, 1993-1996.

Member, GLAXO Pharmacy Affairs Advisory Board, 1992-Continuing.

PROFESSIONAL AFFILIATIONS:

American Pharmaceutical Association
Association of Military Surgeons of the United States
New Orleans Progressive Pharmacists Association
American Society of Hospital Pharmacists
Louisiana Pharmacists Association
Chi Delta Mu Fraternity, Inc.
Xavier University of Louisiana Alumni Association
University of Minnesota Alumni Association
American Association of Colleges of Pharmacy
Louisiana Society of Hospital Pharmacists
Southeast Louisiana Society of Hospital Pharmacists
Omega Psi Phi Fraternity, Inc.
National Pharmaceutical Association
Naval Reserve Association
National Naval Officers Association
National Association of Minority Medical Educators
Association of Minority Health Professions Schools
American Public Health Association
The New York Academy of Sciences

TEACHING EXPERIENCE:

Management of Pharmaceutical Services (Phar. 5-250); Teaching Assistant, Selected Lecturers - University of Minnesota

Management of Pharmaceutical Systems (Phar. 5-260); Teaching Assistant, Discussion groups, Selected Lectures - University of Minnesota

Pharmacy Accounting; Teaching Assistant, Selected Lectures - University of Minnesota

Professional Experience (PCL 490), Coordinator of Practical Experience work sites and teaching Drug Information - Xavier University

Hospital and Institutional Pharmacy (PCP 465) - Xavier University

Non-Prescription Drugs and Products (PCL 435) - Xavier University

Pharmacy and Its Environment (PCL 300) - Xavier University

Undergraduate Pharmacy Research (PM 475) - Xavier University

47

TEACHING EXPERIENCE (CONT'D)

Sociopharmacy (503-211) - Howard University

Public Health (503-112) - Howard University

Hospital and Institutional Pharmacy (503-331) Howard University

Drugs and the Elderly (503-331) - Howard University

Introduction to Pharmacy (PHAD 2500) - Xavier University

Behavioral Pharmacy (PHAD 4250) - Xavier University

Hospital Pharmacy Pharmacy Residency Preceptor
(Howard University Hospital)

Dr. Eva D. Jones - October 1, 1979 to September 30, 1981
Ms. Denise P. Toyer - July 1, 1980 to June 30, 1981

RESEARCH:

My research interests include management (with emphasis on motivation), patient hypertension (with emphasis on patient compliance) and pharmacist communication skills.

My research interest for the Ph.D. was that of Pharmacist Improvement of Patient Compliance; measuring the acceptance of th pharmacist taking blood pressures of diagnosed hypertensive patients and monitoring them for compliance. My Ph.D. thesis was entitled "Pharmacist Improvement of Patient Compliance". I published three research papers prepared in partial fulfillmer of the M.S. in Hospital Pharmacy on the following subjects:

(1) Implementation of Drug Utilization Review Program.

(2) Evaluation of the Drug Information Center at the University of Minnesota Hospitals.

(3) Motivation and the Hospital Pharmacy Administrator.

Research Fellowship: Hypertension Research Development Summer Program for Minority School Faculty, Tulan University School of Medicine, New Orleans, Louisiana, May 30 - August 20, 1977.

Grants: Principal and Co-investigator of grant entitled "A New Approach for Possibly Enhancing Patient Compliance in New Orleans Area Black Hypertensive Population", #3 S04RR08008-0851, funded by the Division of Research Resources and the National Heart, Lung, and Blood Institute, funded August 15, 1978 to May 31, 1980. (Amount: $57,000)

"A Proposal for the Establishment of a Communications Laboratory in Howard University College of Pharmacy and Pharmacal Sciences", funded by Smith Kline Corporation for $15,000, June 18, 1981.

Program Director, Health Career Opportunities Grant (HCOP), #1720635884A1 Office of Disadvantaged Assistance, Bureau of Health Professions, U.S. Public Health Service funded from September 1984 to August 1987 for a total award of $718,855.

Grants (cont'd)

Program Director, Cooperative Agreement, Advanced Financial Distress Program #2D14MB16010-06, Bureau of Health Professions, U.S. Public Health Service, funded from March 1, 1982 to December 31, 1987 for a total award of $2,099,566.

Program Director, Centers For Excellence Grant, #1D34MB00006-01, Bureau of Health Professions, U.S. Public Health Service, funded from July 1, 1988 through June 30, 1991 for a total award of $4,497,998.

Principal Investigator, Research Center in Minority Institution, #1612RR05075-01, Division of Research Resources, National Institutes of Health, funded September 30, 1988 through September 29, 1993 for a total award of $4,128,000.

Program Director, Centers For Excellence Grant, #2D34MB00006-04, Bureau of Health Professions, U.S. Public Health Service funded from July 1, 1991 though June 30, 1994 for a total of $6,454, 354.

PUBLICATIONS:

Grace, M. and Wertheimer, A.I.: "Judgemental Questions Processed by Drug Information Center", Amer. J. Hosp. Pharm., 32: 903-904 (Sept.) 1975.

Grace, M.: "Pharmacist-Manned Drug Information Center at Xavier University", The Louisiana Pharmacist 35: 37 (Feb.) 1976.

Grace, M.: "Alcohol Intoxication and Withdrawal", The Louisiana Pharmacist, 35: 26-27 (May) 1976.

Grace, M. et al.: "Optional Rotation of Externship Program at Xavier University College of Pharmacy", J. National Pharm. Assoc., 23: 10-16 (Jan.) 1977.

Grace, M.: "Can the Community Pharmacist Improve Compliance in the Hypertensive Patient?" The Louisiana Pharmacist, 36: 27-29 (July) 1977.

Grace, M.: "Hypertension Control in the Black Community", J. National Pharm. Assoc., 23: 9-13 (Oct.) 1977.

McKenny, J.M.: Casineli, M., Gourley, D.R., Grace, M., Mandel, E.A. Editors: Practicing Pharmacist's Handbook Guidelines for the Establishment of High Blood Pressure Control Services by the Practicing Pharmacist, Merck & Co., West Point, Pennsylvania, 1977.

Grace, M.: "How to Evaluate the Actual Effectiveness of Hypertension Screening", Pharmacy Times, 44: 84-90 (April) 1978.

Grace, M.: "Pharmacist Interventions for Hypertensive Compliance", The Apothecary, 90: 20-66 (March/April) 1978.

Grace, M.: "Current Trends and Significant Advances in Hospital and Institutional Pharmacy ", J. National Pharm. Assoc., 24: 26-28, (July) 1978.

Grace, M. and Osigwe, B.A.: "Survey of Attitudes of Community Pharmacists Toward Hypertension Screening", The Louisiana Pharmacist 38: 7-11 (May) 1979.

Stewart, D.M., Lewis, H., and Grace, M.: "Anticoagulant Therapy", J. National Pharm. Assoc., 26: 12-17 (Summer) 1980

Grace, M.: "Motivational Theory Applied to Hospital Pharmacy Practice", Hospital Pharmacy, 15: 594-598 (Dec.) 1980.

PUBLICATIONS (CONT'D)

Grace, M.: "Patient Education: A Sociological and Psychological View", Topics in Hospital Pharmacy Management, 2: 1-6 (Nov.) 1982.

Grace, M.: Book Review - Pharmacy Practice - Social and Behavioral Aspects, American Pharmacy N522: 54 (April) 1982.

Smith, T.R. and Grace, M.: "The Pharmacist As Communicator: Part II-Verbal and Non-Verbal Communication", Topics in Hospital Pharmacy Management 3: 50-63 (May) 1983.

Grace, M.: "Xavier's Annual Report", The Louisiana Pharmacist 42: 22 (Nov.) 1983.

Grace, M.: "Report from the College of Pharmacy - Xavier University of Louisiana", The Louisiana Pharmacist 43: 18-20 (Aug.) 1984.

Grace, M.: "Annual Report from the College of Pharmacy - Xavier University of Louisiana", The Louisiana Pharmacist 44: 8-9 (July) 1985.

Grace, M.: "Report From the College of Pharmacy Xavier University of Louisiana", Louisiana Pharmacist 45: 8-10 (Sept.) 1986.

Grace, M.: "Report From the College of Pharmacy, Xavier University of Louisiana", Louisiana Pharmacist 46: 12-13 (Sept) 1987.

Grace, M.: "Report From the College of Pharmacy, Xavier University of Louisiana", Louisiana Pharmacist 47: 18 (Sept) 1988.

Grace, M., Carmichael, J.W. et al: "Assessment of the Ability of a Pre-Pharmacy Program to Serve Black Americans", J. National Pharm. Assoc., 33: 23-29, (Jan-March) 1989.

Grace, M., "An Overview of Motivation Theory and Practice" Academic Management System, American Association of Colleges of Pharmacy, pp. D-3-1 to D-3-13, 1990.

Grace, M., "The Entry-Level Doctor of Pharmacy Degree: Implications for Minority Pharmacists," J. Pharmacy Teaching 3:9-15, 1992

Grace, M., "The Entry-Level Doctor of Pharmacy Degree: Implications for Minority Pharmacists", Chapter in Multicultural Pharmaceutical Education, Haworth, Binghamton, NY 1992, pp. 9-15.

ABSTRACTS:

Grace, M. and Kabat, H.F.: "Pharmacist Improvement of Patient Compliance", National Conference on High Blood Pressure Control, April 13-15, 1977, Washington, D.C.

Grace, M. and McKenna, W.P.: Evaluating the Effectiveness of Hypertension Screening in the Community Pharmacy", Preventive Medicine, (March) 1978.

Grace, M.: "Evaluating the Effectiveness of Hypertension Screen in a Community Pharmacy", Proceedings of the Minority Research Development Summer Program Seminar, March 31, 1978, Bethesda, Maryland.

Grace, M., et al.: "A New Approach for Possibly Enhancing Patient Compliance in a New Orleans Area Black Hypertensive Population", Preventive Medicine, 8: 166 (March) 1979.

Schexnayder, R.V., Ferdinand, V., Freeman, P., Victorian, I., Robinson, M., Grace, M., and Thompson, M.D.: "A New Approach for Possibly Enhancing Patient Compliance in a New Orleans Area Black Hypertensive Population", MBS Symposium Proceedings, April 15-18, 1979, Atlanta, GA.

ABSTRACTS (CONT'D)

Luke, C.M., Grace, M., Brady, M.E., and Olin, B.R.: "A Survey of Drug Usage by Black Elderly Within the Metropolitan New Orleans Area", MBS Symposium Proceeding, April 15-18, 1979, Atlanta, GA.

Ferdinand, V.L., Mitchell, A.P., Grace, M., and Ochillo, R.F.: "Influence of the Level of Formal Education on Compliance to Anthihypertensive Drug Therapy, MBS Symposium Proceedings, April 15-18, 1979, Atlanta, GA.

Thompson, M.D., Freeman, P., Powell, V., Robinson, M., Schexnayder, R., Victorian, I., Grace, M.: "Improving Patient Compliance in a Black New Orleans Hypertensive Population", MBS Symposium Proceedings, April 7-10, 1980, Atlanta, GA.

Grace, M. "Current Status of Black Health Professional Manpower, American Public Health Association 115th Annual Meeting, October 19, 1987, New Orleans, LA.

Gerald, M.C. Cassady, J.M. and Grace, M. "Ohio State - Xavier Agreement For Graduate and Faculty Collaborative Ventures", AACP Annual Meeting, July 8-12, 1989, Portland, OR.

PAPERS PRESENTED:

"Optional Rotation of Externship Program at Xavier University College of Pharmacy", Special Section of Externship Programs, Meeting of the American Association of Colleges of Pharmacy, August 1976, Minneapolis, Minnesota.

"Modern Trends in Hospital and Institutional Pharmacy", Annual Convention of the Student National Pharmaceutical Association, March 10-12, 1977, New Orleans, Louisiana.

"Pharmacist Improvement of Patient Compliance", Poster Session Economic and Administrative Science Section, American Pharmaceutical Association Annual Meeting, May 17, 1977, New York, N.Y.

"Minnesota Hypertension Demonstration Program", Community Pharmacy Hypertension Monitoring Program/Workshop, March 16-17, 1977. Ft. Lauderdale, FL.

Developing a Workable Evaluation for Preceptors", Special Section on Externship Programs", Annual Meeting of the American Association of Colleges of Pharmacy, August 7-11, 1977, Seattle, Washington.

"A New Approach for Possibly Enhancing Patient Compliance in a New Orleans Area Black Hypertensive Population", National Conference on High Blood Pressure Control, April 6, 1979, Washington, D.C.

"A Survey of Drug Usage by Black Elderly Within the Metropolitan New Orleans Area", MBRS Symposium, April 15-18, 1979, Atlanta, GA.

"Identifying Health and Social Service Agencies", AACP Section of Teachers of Pharmacy Administration and National Pharmaceutical Council Sympsium on Improving, Instruction in Health Promotion and Disease Prevention: Academic and Industry Initiatives, July 31, 1984, Baltimore, MD.

"Minority Students" Affording The Increasing costs of A Health Professions Education". Background paper presented in the Dean's Rountable on "Minority Issues and Financial Assistance Issues". American Association of Colleges of Pharmacy Council of Dean's Meeting, March 9, 1987, Washington, D.C.

"Current Status of Black Health Professional Manpower" - paper presented at Black Caucus of Health Workers of the America Public Health Association 115th Annual Meeting Program, New Orleans, LA, October 18-22, 1987.

LECTURES PRESENTED:

"Drug Interactions": Pharmacology Seminar, Licensed Practical Nurses Association of Louisiana, March 15, 1977, New Orleans, LA.

51

LECTURES PRESENTED (CONT'D)

"Obesity Control Products and Stimulants": Twenty-Second Annual Charles J. Kelly Pharmacy Continuing Education Series, Xavier University of Pharmacy, April 6, 1977, New Orleans, LA.

"Prescription Writing and Working with Pharmacists" Junior and Senior Therapeutics Lectures, Tulane School of Medicine, February 24 and May 5, 1977, New Orleans, LA.

"Prescription Drugs" - "Good Morning New Orleans" Show, WVUE Television Station, Channel 8, New Orleans, LA, April 25, 1977.

"Hypertension" - "To Your Good Health" Show, WWL Television station, Channel 4, New Orleans, LA, July 16, 1977.

"Professional Organizations - Who Needs Them?" - Keynote Address, Student National Pharmaceutical Association, Region III Convention, Purdue University, December 3, 1977.

"Substance Abuse" - "Black is" - WGSO Television Station, Channel 26, New Orleans, LA, October 8, 1978.

"Pharmacist Enhancement of Compliance in Hypertension Patients", Department of Pharmacy Seminar, University of California, San Francisco, December 1, 1987.

"Drug - Drug Interactions of Antiarrhythmics and Digitalis Glycosides", 4th Annual Clinical Pharmacy Symposium on Drug Interactions, Florida A&M University, Tallahassee, Florida, April 20, 1979.

"New Drug Update - Cefaclor and Tamoxifen", Continuing Education Program, Howard University of Pharmacy and Pharmacal Sciences, Washington, D.C., May 9, 1980

"Problems of Medicines" - Senior Adult Lecture Series, Culpepper Garden Senior Adult Center, Arlington, Virginia, May 17, 1981.

"Controlling High Blood Pressure with Drugs" - Presented at a Symposium entitled "The Practical Aspects of Community High Blood Pressure Control", sponsored by Provident Hospital and the Baltimore Urban League, Baltimore, Maryland, August 23, 1981.

"OTC Drugs - Use and Abuse" - Presented to Undergraduate Class in Health Education at the University of the District of Columbia, Washington, D.C., June 12, 1981.

"Pharmacy and Drug Information" - "Common Cents" - WHMM Television Station, Channel 32, Washington, D.C., October 15, 1981.

"Adverse Effects of Drugs on the Elderly" - Presented at the Second Annual Workshop on Perspective of Aging: Assessment and Health Maintenance, Howard University Hospital, Washington, D.C., April 22, 1982.

"Problems of Medicines" - Senior Adult Lecture Series, Culpepper Garden Senior Adult Center, Arlington, Virginia, May 23 1982.

"Drug & Food Interactions" - WHUR FM Radio Station, Washington, D.C., March 15, 1982.

"Problems of Medicines" - Civic Club - Calvert Baptist Church, Washington, D.C., June 7, 1982.

"Motivation and the Hospital Pharmacist" - D.C. Society of Hospital Pharmacist, Washington, D.C, September 14, 1982.

"Communication Skills For Practicing Pharmacists" - Continuing Education Program, Howard University College of Pharma and Pharmacal Sciences, Washington, D.C , September 11, 25, 1982, October 2, 1982.

"Parliamentary Procedures" - Presented at Region IV Student National Pharmaceutical Association, Texas Southern Universi School of Pharmacy, Houston, Texas, March 12, 1983.

52

LECTURES PRESENTED (CONT'D)

"Trends in Black and Minority Student Enrollment: Implications for Undergraduate, Graduate and Professional Schools, presented at Ohio State University College of Pharmacy, Columbus, OH, September 30, 1988.

"Generic Drug Use," Presented at weekly continuing Education Program for Family Practice Residents at Washington-St. Tammany Hospital, Bogalusa, LA, Jan. 13, 1989.

"Educating Minority Health Care Providers" presented at "Rural and Minority Health Care Conference", University of Alabama at Birmingham, Birmingham, AL September 15, 1989.

"An Overview of Minority Health Professional Manpower", presented at Texas Pharmacy Week Program, Ben Taub General Hospital, Houston, TX October 20, 1989.

"Crises In Medicinal Chemistry Manpower: A Dean's Perspective," presented at 18th MALTO Medicinal Chemistry-Pharmacognosy meeting, New Orleans, LA, May 19-21, 1991.

"Past, Present and Future Issues Facing Minority Pharmacists" presented at Temple University School of Pharmacy as keynote speaker - "An Afrocentric Perspective: The Pharmacy Degree - Career Opportunities and Challenges in the '90's", Philadelphia, PA, November 1, 1991.

Luncheon Speaker, National Association of Medical Minority Educators, Southern Region Meeting, New Orleans, LA, March 20, 1992.

Panel Presentation, Alpha Kappa Mu Honor Society Regional Meeting, Xavier University, New Orleans, LA, April 9, 1992.

"External Doctor of Pharmacy Degree and Navy Pharmacy", 1992 BUMED/AMSUS Navy Pharmacy Leadership Conference, Virginia Beach, VA, October 25, 1992.

"Educating the Pharmacist Practitioner for the 21st Century", Pharmacy Section Luncheon Speaker, 99th Annual Meeting, Association of Military Surgeons of the United States, Nashville, TN, November 17, 1992.

REVIEW BOARDS:

Member, Peer Review Board, Health Sciences Consortium, 1980 - Continuing.

Member, Review Panel for Contributed Papers in Administrative Pharmacy Practice, 17th Annual ASHP Mid-Year Clinical Meeting, December 5-9, 1982.

Member, Review Panel for Contributed Papers in Administrative Pharmacy, 40th ASHP Annual Meeting, Detroit, Michigan, June 6-10, 1983.

Technical Reviewer, National Center for Health Services Research, Rockville, MD, 1983 - Continuing.

Reviewer, Journal of the National Pharmaceutical Association, 1984 - Continuing.

Member, Review Panel for Contributed Papers in Administrative Pharmacy, 41st ASHP Annual Meeting, Boston, Mass., June 3-7, 1984.

Reviewer, Contributed papers in Evaluative Studies and Management Case Studies, 19th Annual ASHP Mid-Year Clinical Meeting, December 2-6, 1984.

Reviewer, Contributed Papers, 20th Annual ASHP Mid-Year Clinical Meeting, New Orleans, LA, December 1-5, 1985.

Member, Institutional Review Board, Clinical Research Center, New Orleans, LA 1985 - Continuing.

REVIEW BOARDS (CONT'D)

Reviewer, Contributed papers in Evaluation Studies and Management Case Studies, 43rd ASHP Annual Meeting, Denver, CO, June 1986.

Reviewer, Contributed Evaluative Studies and Management Case Studies, 21st ASHP Mid-Year Clinical Meeting, Las Vegas, NV, December 1986.

Medical Consultant to Board of Trustees of the United Teachers of New Orleans Health and Welfare Fund, August 1986 - Continuing.

Reviewer, Contributed papers in Evaluative Studies and Case Management Studies 44th ASHP Annual Meeting, Washington D.C., June 1987.

Reviewer, Evaluative Studies and Management Case studies 23rd Annual ASHP Mid-Year Clinical Meeting, Dallas, TX, December 1988.

Reviewer, Management Case Studies, 46th ASHP Annual Meeting, Nashville, TN, June 1989.

Reviewer, Contributed Posters, 24th Annual ASHP Mid-Year Clinical Meeting, Atlanta, GA, December 1989.

Reviewer, Management Case Studies, 47th ASHP Annual Meeting, Boston, MA, June 3-7, 1990.

Reviewer, Poster Summaries - Description Reports and Research - in Progress Reports, 25th ASHP Midyear Clinical Meeting Las Vegas, December 1990.

Member, Special Review Committee, RCMI Grant, Florida A&M University, March 3-4, 1991.

Reviewer, Management Case Studies, 48th ASHP Annual Meeting, San Diego, CA, June, 1991.

Reviewer, Descriptive Reports, 1991 ASHP Midyear Clinical Meeting, New Orleans, LA, Dec. 1991.

Member, Editorial Board, HealthCare New Orleans, 1992-1993.

Reviewer, Descriptive Reports, 49th ASHP Annual Meeting, Washington, DC, June 1992.

Reviewer, Management Case Studies, 27th (1992) ASHP Midyear Clinical Meeting, Orlando, FL, December, 1992.

3-22-93

Appendix B

APPENDIX B

THE AMERICAN COUNCIL ON PHARMACEUTICAL EDUCATION
311 West Superior Street • Chicago, Illinois 60610 • 312/664-3575 • FAX 312/664-4652

Daniel A. Nona, Ph.D., Sc.D.
Executive Director

February 15, 1990

TO: Pharmacy Community

FROM: Daniel A. Nona

RE: Procedures and Schedule for the Revision of Accreditation Standards and Guidelines (Ninth Edition)
Years: 1990-2000

In a statement, dated September 17, 1989, the ACPE Board of Directors provided notice of its intention to propose revision of accreditation standards in the 1990's within the framework of a doctor of pharmacy program. The opinion of the Council was presented to the pharmacy community and the public with the additional statement that full and open discussions were intended in keeping with published procedures which provide opportunities for hearings and the submission of written comments regarding revision of curricular and other standards. It was also stated that the Council expects the due process period to take substantially longer than revision processes of the past. Specific procedures and the schedule for the revision process were planned for release during 1990.

Enclosed, are details of the procedure for formulation of proposed revisions and the schedule for the comment period.

DAN:lm
Enclosure

Declaration of Intent: Revision of Accreditation Standards in 1990's in Keeping with Changes in Pharmacy Practice and Pharmaceutical Education

The American Council on Pharmaceutical Education recognizes the changes occurring and contemplated in health care and acknowledges that the societal purpose of pharmacy dictates that it be a patient-centered practice. Hence, it is the view of ACPE that the mission of the pharmacy practitioner is to assume responsibility for providing pharmaceutical services that ensure rational drug use in the individualized care of patients.

The goals of the pharmacy practitioner's services are:

1) to provide drug therapy that is appropriate, safe, efficacious and cost effective;
2) to educate and motivate patients to assume an appropriate and active role in self-care and the management of their drug therapy as related to their particular medical conditions; and
3) to effect the appropriate distribution of medication to patients.

The ACPE intends to establish new programmatic accreditation standards that reflect and respond to the above mission set-forth for the pharmacy practitioner. Based upon the Council's analysis and assessment of current practice developments, future practice challenges and the corresponding educational preparedness needed, the Council foresees the time when the accreditation standards will focus upon a doctor of pharmacy program as the only professional degree program evaluated and accredited. This new direction may become adopted as soon as the year 2000.

The ACPE presents this opinion to the pharmacy community and the public. Full and open discussions are intended, including hearings and written comments regarding revision of curricular and other standards. The procedure for hearings and submission of written comments will be released in 1990.

<u>Developed and unanimously approved by the Board of Directors of the American Council on Pharmaceutical Education, September 17, 1989.</u>

Ellen E. Chaffee
Robert K. Chalmers
Jack L. Coffey
Jack R. Cole
Leonard J. DeMino
Harold N. Godwin
Michael E. Hart, Jr.
William J. Kinnard, Jr.
Evelyn D. Timmons
John H. Vandel

AMERICAN COUNCIL ON PHARMACEUTICAL EDUCATION

PROCEDURES AND SCHEDULE FOR THE REVISION OF ACCREDITATION STANDARDS AND GUIDELINES (NINTH EDITION)

January 7, 1990

PROCEDURES AND SCHEDULE FOR THE REVISION OF ACCREDITATION STANDARDS AND GUIDELINES (For the Ninth Edition)

1990-2000

INTRODUCTION

Since the first accreditation standards were published in 1937, these evaluative criteria have been revised periodically, approximately every six or seven years, in keeping with changes in pharmaceutical education and pharmacy practice. The current standards and associated guidelines (eighth edition) were adopted July 1, 1984, and became effective January 1, 1985. In September 1989, the American Council on Pharmaceutical Education announced its intention to initiate the next revision process.

The ACPE's view of the mission of the pharmacy practitioner and the goals of the pharmacy practitioner's services were presented along with the Council's intention to establish new programmatic accreditation standards that will reflect and respond to the mission set-forth for the pharmacy practitioner. Moreover, it was stated that this new direction may become adopted as soon as the year 2000 (cf. ACPE Declaration of Intent, September 17, 1989, copy appended). This opinion was presented to the pharmacy community and the public with the understanding that full and open discussions would be held in accord with ACPE's published policies and procedures for the revision of accreditation standards. It was indicated that the procedure for hearings and submission of written comments was to be released in 1990.

The first five years of the ten-year revision process will be primarily devoted to the formulation of proposed revisions. This will include broadly-based input regarding competencies and curricular content necessary for a generalist pharmacy practitioner. The second five years provide for open hearings and submission of written comments. The details regarding the procedure for formulation of proposed revisions as well as the schedule for the comment period are as follows:

AMERICAN COUNCIL ON PHARMACEUTICAL EDUCATION

Procedure and Schedule for the
Revision of Accreditation Standards and Guidelines in the 1990's

I. Distribution of Agenda for Development and Schedule for Hearings. Timeline: Spring 1990.

II. Competency and Content Development: Broadly-Based and Participatory Procedures for Development of Proposed Revisions of Standards. Timeline: June 1990-June 1991.

A. ACPE extends an invitation to sponsoring organizations as well as to all other professional societies (e.g., JCPP membership) to:

1. Provide key competencies or other educational outcome characteristics which the organization feels are necessary for a generalist pharmacy practitioner (i.e., community and hospital practice) to meet the societal purpose of pharmacy at present and in the future.

2. Review and analyze current curricular standards for both professional programs accredited by ACPE (i.e., baccalaureate in pharmacy and doctor of pharmacy). The relative importance and emphasis which should be given to each curricular area to provide for future educational preparedness as a generalist pharmacy practitioner should be assessed. [A standardized format will be provided by ACPE which may be used to assist in this review and analysis.]

3. Submit suggestions and recommendations for reduced emphasis (or deletions) and increased emphasis (or additions) which are deemed necessary for each professional program (baccalaureate in pharmacy and doctor of pharmacy) to prepare graduates as general practitioners so as to meet the societal purpose of pharmacy at present and the future, as set-forth in A-1 above. The mission of the pharmacy practitioner and the goals of the pharmacy practitioner's services as presented in the ACPE Declaration of Intent, September 18, 1989, may be used as guidance.

Recommendations and suggestions should also be included related to enhancing efficiencies in the educational process involving students as active learners and maturing professionals consistent with

program outcome goals, and emphasis on the development of problem-solving skills.

Note: While comments may be included on the programmatic framework as presented in the ACPE Declaration, the purpose of this analysis is to ascertain opinions for competencies and content.

4. Provide perspectives and recommendations for appropriate educational development of baccalaureate degreed pharmacists already in practice (e.g., non-traditional educational approaches). This input should include appropriate education and training program innovations as well as assessment processes for outcome characteristics and individualized practice patterns of pharmacists.

III. **Analysis and Preliminary Formulation of Proposed Revisions of Standards. Timeline: June 1991 - June 1992.**

A. ACPE analyzes responses from the pharmacy community (e.g., frequency of comments, analysis of recommendations, weighing of opinions).

B. ACPE formulates, as of June 1992, in appropriate accreditation/technical language, proposed revisions of standards in accord with the programmatic framework of a doctor of pharmacy program, as presented in the Declaration of Intent. (This will involve a process of merging program standards.)

IV. **Preliminary Review of Proposed Revisions by Professional Societies. Timeline: June 1992 - June 1993.**

ACPE appoints an ad hoc Advisory Committee on Standards Revision. The charges to this committee include:

a) assistance in the continuing development of proposed revisions;
b) review of and reaction to a doctor of pharmacy programmatic framework;
c) review of and reaction to curricular and other revised standards as proposed.

Note: The member of the ad hoc committee (approximately 10-12 members) will be appointed on the nomination of sponsoring organizations and other professional and educational societies.

V. ACPE Reviews Findings and Recommendations of ACPE ad hoc Advisory Committee on Standards Revisions. Timeline: June 1993 - June 1994.

A. If general approval is noted, ACPE may proceed to hearing stage.

B. If recommendations are made with regard to changes in content, curricular or other standards, the ACPE may modify, revise or refine, and then proceed to hearing stage.

C. If the committee expresses broad countervailing sentiment regarding the revisions as proposed, including the doctor of pharmacy programmatic framework, the ACPE would reconsider the programmatic approach.

VI. Comment Period #1 (For Option A and B above). Timeline: June 1994 - June 1995.

Open hearings are to be scheduled at professional organization meetings and written comments are invited over a one-year period.

VII. ACPE Review #1. Timeline: June 1995 - January 1996.

Reactions obtained during the comment period are considered, and the modified standards are readied for subsequent comments. Or, if reconsideration of the programmatic framework is needed, the Council would modify the revision procedure as in V.(C.) above.

VIII. Comment Period #2. Timeline: January 1996 - January 1997.

Open hearings are scheduled at professional organization meetings and written comments are invited over a one-year period.

IX. ACPE Review #2. Timeline: January 1997 - June 1997.

A. Reactions to Comment Period #2 are considered; modifications are made where indicated.

B. Standards adopted - June 1997.

C. Effective date to be established based upon resource development, etc., perhaps as soon as July 1, 2000.

Note: If the proposed revision of standards is to be reconsidered as of **June 1994** (cf. V.(C.) above), based upon countervailing sentiment expressed by the ad hoc Advisory Committee on Standards Revision, or subsequent to the scheduled comment periods, the information gathered to date may be utilized for purposes of standards revisions within the current programmatic framework (e.g., baccalaureate in pharmacy and doctor of pharmacy program). A revision process would need to be rescheduled but should be completed within an additional two years.

The Board of Directors of the American Council on Pharmaceutical Education, January 7, 1990.

Ellen E. Chaffee
Robert K. Chalmers
Jack L. Coffey
Jack R. Cole
Leonard J. DeMino
Harold N. Godwin
Michael E. Hart, Jr.
William J. Kinnard, Jr.
Evelyn D. Timmons
John H. Vandel

Appendix C

APhA Contact:
Melanie Privette
202/ 429-7558

ASHP Contact:
Rebecca Wilfinger
301/ 657-3000 x224

NARD Contact:
Todd Dankmyer
703/ 683-8200

FOR IMMEDIATE RELEASE
November 22, 1991

APhA, ASHP, AND NARD RELEASE JOINT STATEMENT ON ENTRY-LEVEL PHARMACY DEGREE

(WASHINGTON, DC)–The American Pharmaceutical Association, the American Society of Hospital Pharmacists, and NARD: the national association representing independent retail pharmacy, today released a joint statement on the issue of the entry-level degree for the pharmacy profession. The statement, reflecting the consensus position of the nation's three largest pharmacy practitioner associations, has been developed to demonstrate the organizations' commitment to resolving this issue.

Among the points made in the joint statement are the following:

- The three organizations support a ***new*** doctor of pharmacy degree to prepare pharmacists for entry into practice. This degree will be distinct from many current doctor of pharmacy degrees in that it will focus on training pharmacists for entry-level practice rather than specialty practice.
- The nation's colleges of pharmacy are strongly encouraged to develop a degree transfer process for current holders of the Bachelor of Science in Pharmacy degree. This should be done with the active support of the American Council on Pharmaceutical Education.
- For current B.S. degree pharmacists whose colleges do not provide degree transfer, pharmacy's professional associations will develop an institute for the purpose of granting a certificate of Pharm.D. equivalence.

- m o r e -

News Release

- The completion of the *new* doctor of pharmacy curriculum should result in immediate licensure upon successful passage of a state licensure examination.
- The three organizations strongly encourage greater use of qualified active pharmacy practitioners on the faculties and curriculum committees of the nation's colleges of pharmacy.

The full text of the joint statement is attached.

The American Pharmaceutical Association, the national professional society of pharmacists, represents the third largest health profession composed of more than 150,000 pharmacy practitioners, pharmaceutical scientists, and pharmacy students. Since its founding in 1852, APhA has been a leader in the professional and scientific advancement of pharmacy and in safeguarding the well-being of the individual patient.

ASHP is the 23,000-member national professional association that represents pharmacists who practice in health-care systems, including hospitals, health maintenance organizations, long-term care facilities, and home-care agencies. The Society has extensive publishing and educational programs designed to help members improve pharmaceutical services, and it is a national accrediting organization for pharmacy residency and pharmacy technician training programs.

NARD, the national association representing independent retail pharmacy, serves the pharmacist owners, managers, and employees of nearly 40,000 independent pharmacies across the country. Independent retail pharmacists – more than 75,000 nationwide – dispense two out of every three retail prescription drugs.

# # #

JOINT STATEMENT ON THE
ENTRY-LEVEL DOCTOR OF PHARMACY DEGREE

ADOPTED BY
AMERICAN PHARMACEUTICAL ASSOCIATION
AMERICAN SOCIETY OF HOSPITAL PHARMACISTS
NARD: REPRESENTING INDEPENDENT RETAIL PHARMACY

PREAMBLE

The lingering issue of the entry-level degree for practicing pharmacists must be resolved expeditiously so that our profession can concentrate its full energies on serving the pharmaceutical care needs of the American people. In addressing this issue, the profession must ensure fairness and equity for its practitioners and students, which will result in the best possible service to the public.

Our organizations, representing practitioners of pharmacy, support a ***new*** Doctor of Pharmacy degree to be awarded for completion of pharmaceutical education designed to prepare a pharmacist for entry into practice. This degree will be distinct from many of the Pharm.D. degrees that currently exist in that it will focus on training for entry-level practice rather than specialty practice. The curriculum for this ***new*** Pharm.D. degree should be the focus of the accreditation standards for entry-level education that are set by the American Council on Pharmaceutical Education (ACPE).

We will apply our collective resources to the implementation of the principles outlined in this statement.

I. DEGREE TITLE

The entry-level degree for practice in the profession of pharmacy should be the Doctor of Pharmacy degree. The designation of the degree should be "Pharm.D."

II. THE *NEW* DOCTOR OF PHARMACY DEGREE

A. It is the responsibility of pharmaceutical education to provide a graduate prepared for immediate licensure and commencement of a career in ***any*** area of pharmacy practice. The focus of the curriculum should be to prepare pharmacists to deliver pharmaceutical care to patients. The entry-level pharmacy graduate should possess the knowledge, skills, and professional commitment:

- **to be responsible for the appropriate use of medications, devices, and services to achieve optimal therapeutic outcomes.**
- **to help people make the best use of medications.**

B. Our organizations strongly encourage greater use by colleges of pharmacy of qualified active practitioners on their faculties and curriculum committees, as well as in other relevant programs and operations.

C. It is the responsibility of pharmacy practice to develop and provide appropriate postgraduate opportunities (e.g., mentoring, residencies, fellowships) to achieve full and continuing competence in the various areas of pharmacy practice.

D. Among the characteristics of the *new* Doctor of Pharmacy curriculum should be the following:

- Sufficient general education to prepare pharmacists to function as active and informed citizens and professionals.
- Instruction in basic, pharmaceutical, clinical, behavioral, and administrative sciences that serve as the basis for the provision of pharmaceutical care.
- Development, through instruction and practice, of the communication and interpersonal skills necessary for effective counseling and communication with all consumers of pharmaceutical care.
- Development of skills in the selection, initiation, and management of drug therapy.
- Development of the problem-identification and problem-solving skills vital to contemporary pharmacy practice.
- Development of a personal commitment to the patient as the focus of professional practice.
- Development of an understanding of the social, ethical, professional, legal, and economic issues in health care.
- Development of an active learning process based on inquiry.
- Development of an attitude of lifelong learning and the ability to adapt to change.
- Development of professional pride and self esteem, which encourage active, responsible roles in health care.
- Encouragement of active involvement in and commitment to the development and delivery of pharmaceutical education.
- Encouragement of active roles in local, state, and national organizations of the profession.

- Provision of undergraduate practical experience, under the guidance of pharmacy practitioners, that is sufficient in quantity, quality, and diversity to permit immediate licensure upon graduation.

III. DEGREE EQUIVALENCE FOR CURRENT PRACTITIONERS

A. The issue of degree equivalence is of primary importance to practitioners, although it also has implications for those in pharmaceutical education and accreditation. The issue is one of professional equity, equal professional opportunity, and the avoidance of real or perceived professional or career barriers.

B. We strongly encourage colleges of pharmacy to develop a degree transfer process for current holders of the Bachelor of Science in Pharmacy degree. This should be done with the active support of ACPE.

C. Our organizations will develop an institute for the purpose of granting a ***certificate of Pharm.D. equivalence*** to current practitioners with the Bachelor of Science in Pharmacy degree.

1. The institute will offer this ***certificate of Pharm.D. equivalence*** for a defined period of time.

2. The institute will provide a variety of options to attain the ***certificate of Pharm.D. equivalence*** (e.g., self-evaluation with self-directed continuing education program; a defined, curriculum-based continuing education program or series).

3. The equivalency process will serve to establish comparability between the professional qualifications of Bachelor of Science in Pharmacy and ***new*** Doctor of Pharmacy degree recipients.

4. Our organizations will actively foster universal acceptance of this degree equivalency process.

5. Pursuit of the degree equivalency process will be kept strictly confidential.

6. A pharmacist's decision not to pursue or not to complete the degree equivalency process will have no effect on his or her state licensure.

Appendix D

APPENDIX D

NEWS RELEASE

RECEIVED
JUL 24 1991

AMERICAN ASSOCIATION
OF COLLEGES OF PHARMACY

1426 Prince Street • Alexandria, Virginia 22314-2841

FOR IMMEDIATE RELEASE
July 15, 1991

Jacqueline L. Eng
703/739-2330

AACP HOUSE SENDS MESSAGE OF SUPPORT TO ACPE

Boston, Massachusetts–The 148-member House of Delegates of the American Association of Colleges of Pharmacy (AACP) last week passed a resolution in support of the American Council on Pharmaceutical Education (ACPE) and the process being used by the Council to revise accreditation standards for pharmaceutical education programs. The resolution was forwarded to the House of Delegates by the Association's Council of Deans and was passed by administrative and faculty delegates representing the Association's 74-member colleges and schools. The resolution read:

> WHEREAS the American Council on Pharmaceutical Education (ACPE) has been an integral part of the mechanism by which the profession of pharmacy has advanced since the 1930s;
>
> WHEREAS the American Association of Colleges of Pharmacy (AACP) has been an active supporter of ACPE since its inception;
>
> WHEREAS ACPE has an established record of consistently serving the profession and pharmaceutical education well;
>
> WHEREAS the process whereby ACPE establishes accreditation standards has evolved carefully and methodically over a period of many years;
>
> WHEREAS this process allows for consideration of the views of all interested parties;
>
> WHEREAS pharmaceutical education and professional practice are undergoing profound change;

Continued...

AACP represents the 74 colleges and schools of pharmacy in the United States and Puerto Rico, faculty members and other individuals interested in pharmaceutical education.

AACP HOD Supports ACPE
July 15, 1991

WHEREAS the ACPE process of standards revision will continue to play a crucial role in the evolution of the profession of pharmacy;

THEREFORE, BE IT RESOLVED that the AACP reaffirms its support of the ACPE and the process it has established for revising the accreditation standards for pharmaceutical education programs.

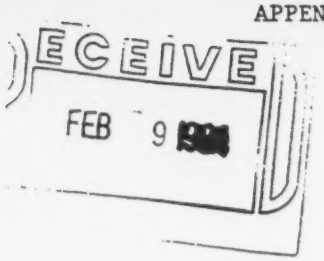
Actions affirmed by the House of Delegates become Association policy.

# # # #

91-13

Appendix E

APPENDIX E



MEMORANDUM

AMERICAN ASSOCIATION
OF COLLEGES OF PHARMACY

1426 Prince Street • Alexandria, Virginia 22314-2841
(703) 739-2330 • FAX (703) 836-8982

February 9, 1994

TO: Elaine at Xavier College of Pharmacy

FROM: Dick Penna
Associate Executive Director

RE: Dean Grace's Request

Attached is AACP's Vital Statistics sheet that we publish regularly. I have indicated with *** those schools that currently offer only the entry Pharm.D. degree. Included are some schools that intend to offer only the Pharm.D. after the 1994-94 academic year.

Schools listed with * are those that plan to discontinue offering the B.S. as of the 1994-94 academic year.

It's harder to get information on plans (other than that reflected in the Vital Stats. If I find anything, I'll let you know.

I hope this helps.

Programs in Pharmacy

The following inventory represents programs offered by the 75 U.S. colleges and schools of pharmacy. To ascertain the current accreditation status of each program, contact the individual college or school or The American Council on Pharmaceutical Education, 311 West Superior Street, Suite 512, Chicago, Illinois 60610; 312/664-3575.

Pharm.D. as first professional degree (41):

Samford University (AL)
Arizona, University of
Arkansas, University of
California-San Francisco, University of
Pacific, University of the (CA)
Southern California, University of
Colorado, University of
Howard University (DC)
Florida A & M University
Southeastern University of the Health Sciences (FL)
Florida, University of
Mercer University (GA)
Idaho State University
Illinois at Chicago, University of
Butler University (IN)
Purdue University (IN)
Drake University (IA)
Iowa, University of
Kansas, University of
Kentucky, University of
Xavier University of Louisiana
Maryland, University of
Ferris State University (MI)
Michigan, University of
Minnesota, University of
St. Louis College of Pharmacy (MO)
Missouri at Kansas City, University of
Creighton University (NE)
Nebraska, University of
Rutgers University (NJ)
New Mexico, University of
Campbell University (NC)
North Carolina at Chapel Hill, University of
North Dakota State University
Philadelphia College of Pharmacy and Science (PA)
South Carolina, University of
South Dakota State University
Tennessee, University of
Texas at Austin, University of
Utah, University of
Virginia Commonwealth University

B.S. in pharmacy or B.Pharm. (60):

Auburn University
Samford University (AL) *
Colorado, University of
Connecticut, University of
Howard University (DC) *
Florida A & M University
Southeastern University of the Health Sciences (FL)
Florida, University of
Georgia, University of
Chicago College of Pharmacy (IL)
Butler University (IN)
Purdue University (IN)
Drake University (IA)
Iowa, University of
Kansas, University of
Kentucky, University of
Northeast Louisiana University
Massachusetts College of Pharmacy and Allied Health Sciences
Northeastern University (MA)
Ferris State University (MI)
Wayne State University (MI)
Minnesota, University of
Mississippi, University of
St. Louis College of Pharmacy (MO)
Missouri at Kansas City, University of
Montana, University of
Creighton University (NE) *
Rutgers University (NJ)
New Mexico, University of
Arnold & Marie Schwartz College of Pharmacy and Health Sciences (NY)
St. John's University (NY)
New York at Buffalo, State University of
Albany College of Pharmacy (NY)
North Carolina at Chapel Hill, University of
Ohio Northern University
Ohio State University
Cincinnati, University of (OH)
Toledo, University of (OH)
Southwestern Oklahoma State University
Oklahoma, University of
Oregon State University
Duquesne University (PA) *
Philadelphia College of Pharmacy and Science (PA)
Temple University (PA)
Pittsburgh, University of (PA)
Puerto Rico, University of
Rhode Island, University of
South Carolina, Medical University of
South Carolina, University of
South Dakota State University *
Texas Southern University
Houston, University of (DC)
Texas at Austin, University of
Utah, University of
Virginia Commonwealth University
Washington, University of
Washington State University
West Virginia University
Wisconsin, University of
Wyoming, University of

Pharm.D. degree as a post-B.S. in pharmacy degree (53):

Auburn University
Samford University (AL)
Arizona, University of
Arkansas, University of
Pacific, University of the (CA)
Colorado, University of
Howard University (DC)
Florida A & M University
Southeastern University of the Health Sciences (FL)
Florida, University of
Georgia, University of
Idaho State University
Chicago College of Pharmacy (IL)
Illinois at Chicago, University of
Butler University (IN)
Purdue University (IN)
Drake University (IA)
Iowa, University of
Kentucky, University of
Xavier University of Louisiana
Massachusetts College of Pharmacy and Allied Health Sciences
Ferris State University (MI)
Michigan, University of
Wayne State University (MI)
Minnesota, University of
Mississippi, University of
St. Louis College of Pharmacy (MO)
Creighton University (NE)
Rutgers University (NJ)
New Mexico, University of
St. John's University (NY)
New York at Buffalo, State University of
Albany College of Pharmacy (NY)
Campbell University (NC)
North Carolina at Chapel Hill, University of
North Dakota State University
Ohio State University
Cincinnati, University of (OH)
Toledo, University of (OH)
Oklahoma, University of
Duquesne University (PA)
Temple University (PA)
Pittsburgh, University of (PA)
Rhode Island, University of
South Carolina, Medical University of
South Dakota State University
Texas Southern University
Texas at Austin, University of
Utah, University of
Virginia Commonwealth University
Washington, University of
West Virginia University
Wisconsin, University of

* 1993-94 is the last year degree program will be offered.
** Program begins in January 1994.

November/93

Appendix F

Survey of Schools and Colleges of Pharmacy
Position Concerning Pharm.D. Degree
February 1993

Survey was sent to the 61 schools and colleges of pharmacy still offering the baccalaureate degree in pharmacy. As of February 25, 1993, 56 completed surveys were returned (91.80 percent response rate). Of the 56 respondents:

- Nine schools (16.07 percent) have not made the decision to offer the Pharm.D. as the only entry-level degree and are not currently considering such a decision.
- Twenty (35.71 percent) have not made the decision to offer the Pharm.D. as the only entry-level degree, but are currently considering such a decision.
- Twenty-seven (48.21 percent) have made the decision to offer only the Pharm.D. degree. These schools are listed below by their indicated implementation dates.

fall 1993	University of Maryland
fall 1994	Samford University Howard University University of Mississippi Creighton University Duquesne University South Dakota State University Texas Southern University University of Houston
1994/95 or 1995/96	Washington State University
fall 1996	University of Oklahoma
in 3 to 5 years	University of Kentucky
by 2000	Southeastern University University of Florida University of Kansas
when approved (university/state), student demand warrants, and/or funding is available	University of Iowa University of Missouri-KC University of Texas-Austin West Virginia University Florida A&M University
undecided	Purdue University Drake University University of Pittsburgh University of South Carolina University of Utah University of Wisconsin University of Wyoming

What structure or procedure is being used to reach a decision?

Procedure	Number of Respondents
Curriculum Committee	9
Special task force or committee	8
School of Pharmacy executive committee	1
Dean	0
Other: faculty	2

Please evaluate the relative importance of the following obstacles to conversion from your current program to a professional program in which the Pharm.D. degree is the single entry-level degree.

Scale: 1 = no barrier, 2 = slight barrier, 3 = moderate barrier, 4 = serious barrier, 5 = insurmountable barrier

	1	1.5	2	2.5	3	3.5	4	4.5	5	Median
Obtaining sufficient financial resources.	0		8		11		30		6	4
Availability of sufficient faculty for new positions.	3		10		26		13		4	3
Insufficient number of practice training sites.	6		8	1	22	1	18		0	3
Insufficient space within the school.	16		20		11		8		1	2
Obtaining faculty approval.	27		13		12		4	1	2	2
Obtaining practitioner support in your state.	14	1	16		17		8		0	2
Sufficient post-Pharm.D. training opportunities.	15		18		12		9		1	2
Obtaining student acceptance.	19		25		10		2		0	2
Impact on enrollment in graduate programs.	27	1	18		10		0		0	1.75
Overcoming university or state regulations.	19		20		7		11		6	2
Other, please specify: Alumni support.	1									
Other, please specify: What other schools in area decide to do.			1							
Other, please specify: Upper administration.					1					
Other, please specify: NASULGC activities.					1					
Other, please specify: Politics.							1			
Other, please specify: Council on Higher Education, politics.							1			
Other, please specify: We still think this is a bad idea.							1			
Other, please specify: Faculty approval of specific curricular changes.							1			
Other, please specify: State Board of Regents.							3			

Other, please specify: Chain store management opposition.							1			
Other, please specify: Key pharmacist leadership opposition.							1			
Other, please specify: Documented public interest, impact for investment.									1	

If you were to offer the Pharm.D. as the only professional practice degree, what is the minimum number of years after high school it would take to earn the degree?

Number of Academic Years	Number of Respondents	Number of Calendar Years	Number of Respondents
4	1	4	1
6	29	5.5	1
6+	2	6	19
6.5	4	6-7	1
6-7	2	7	1
7	7		
7-8	1		

If you were to offer the Pharm.D. as the only professional practice degree, do you think that it would change the number of students that you accept into you entry class?

	No. of Respondents	Percent Decrease	No. of Respondents	Percent Increase	No. of Respondents
No change	21	10	2	10	1
		10-15	2	15	1
		10-20	1	20	1
		15-20	1		
		20	3		
		20-25	1		
		25	3		
		30	4		
		30-40	1		
		30-50	1		
		33	1		
		40	2		
		46	1		
		50	5		

Appendix G

Survey of SUS Pharmacy Graduates and Employers[2]

[2]The following is an excerpt from the Florida Employer Opinion Survey, Annual Report published in June 1993 by the Florida Education and Training Placement Information Program (FETPIP). The survey of 1990-91 graduates of SUS pharmacy programs, and their training-related employers, was conducted by FETPIP, using the employment period October - December 1991.

SECTION XIII. PHARMACY

A. BACKGROUND/RESPONSES

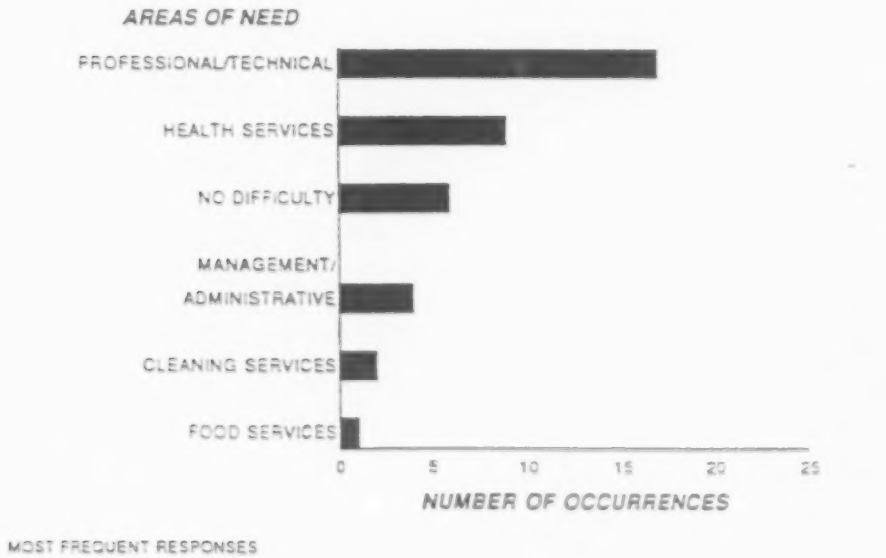
Two survey types were utilized for each University discipline. Half of the employers (22) received a general survey, similar to one used in prior years activities with District/ Community College program areas. The other half (23) received a specific survey, designed from requirements for licensure as a pharmacist in Florida.

There were 45 Pharmacy employers identified as having hired a training-related graduate. Of those, 69% or 31 (14:General,17:Specific) firms responded to the survey request.

B. HIRING NEEDS

This first inquiry requested that employers identify those job categories in which they were experiencing difficulties in finding qualified applicants. There were ten categories along with one for "no difficulty" listed and an open-ended/other/future needs area made available for comment. Employers could identify as many areas of difficulty as were appropriate. Figure 53 shows those occupational areas where pharmacy employers identified their highest need.

FIGURE 53
EMPLOYER HIRING NEEDS
PHARMACY



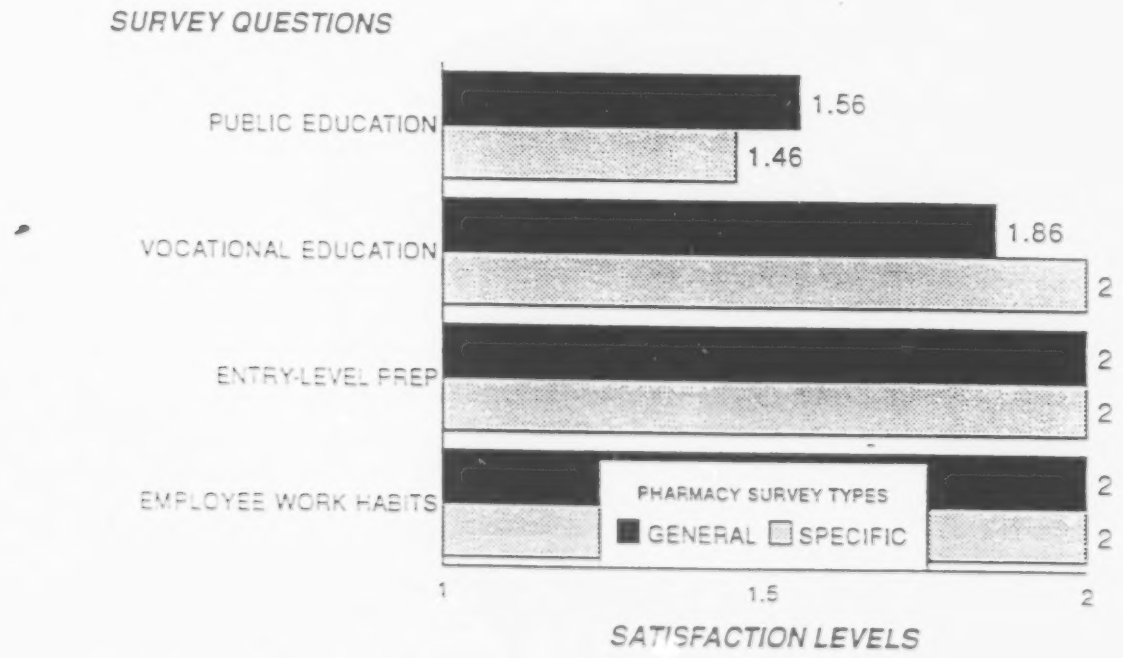
MOST FREQUENT RESPONSES

FIGURE 53 COMMENTS: By far, employers indicated that they were having the most difficulty finding qualified applicants within the professional/technical occupational area. The next highest response category chosen was health services. In the comment section for this inquiry the most mentioned needs were for physical, speech, and occupational therapists.

C. GENERAL EDUCATION/PREPARATION QUESTIONS

Each survey type asked employers to reflect their general level of satisfaction with public education, vocational education, entry-level job preparation, and employee work habits. Figure 54 is a graphic presentation of those four areas and their calculated levels of satisfaction for both the general and specific pharmacy opinion surveys. In reviewing the graphs, a score of "1.50" should be considered the dividing line between "satisfied" and "dissatisfied".

FIGURE 54
GENERAL PUBLIC EDUCATION
AND PREPARATION QUESTIONS



2= VERY SATISFIED; 1=VERY DISSATISFIED
1.5= NEITHER SATISFIED/NOR DISSATISFIED

FIGURE 54 COMMENTS: Responses to both the general and the specific survey indicated that employers were very satisfied with vocational education, entry-level preparation, and with employee work habits. Specific survey responses reflected dissatisfaction with public education. There were no dissatisfied responses for either survey type concerning their employees' entry-level preparation or work habits.

D. OVERALL OCCUPATIONAL PREPARATION

"New pharmacists need additional managerial skills in the area of budgeting for instance."
... A Florida Employer

Part C, Overall Occupational Preparation consisted of 13 questions on the general and 12 questions on the specific pharmacy opinion survey. These questions were grouped into two areas: basic skills and job related or technical skills. The general survey was structured from prior year surveys and contained the same elements for each university degree area. The specific pharmacy survey items were extracted from the pharmacy licensure exam required for licensure in Florida. These areas with their specific internal components for the general and specific pharmacy surveys are displayed graphically in Figures 55, 56, 57, and 58.

1. Basic Skills - The overall satisfaction level for basic skills preparation was 1.93, or very satisfied. Figure 55 looks at five basic skills from the general survey and their respective employer responses. Figure 56 looks at four basic skills from the specific pharmacy survey and the employer responses.

a. General Survey - The overall score for general survey basic skills was 1.98 or very satisfied.

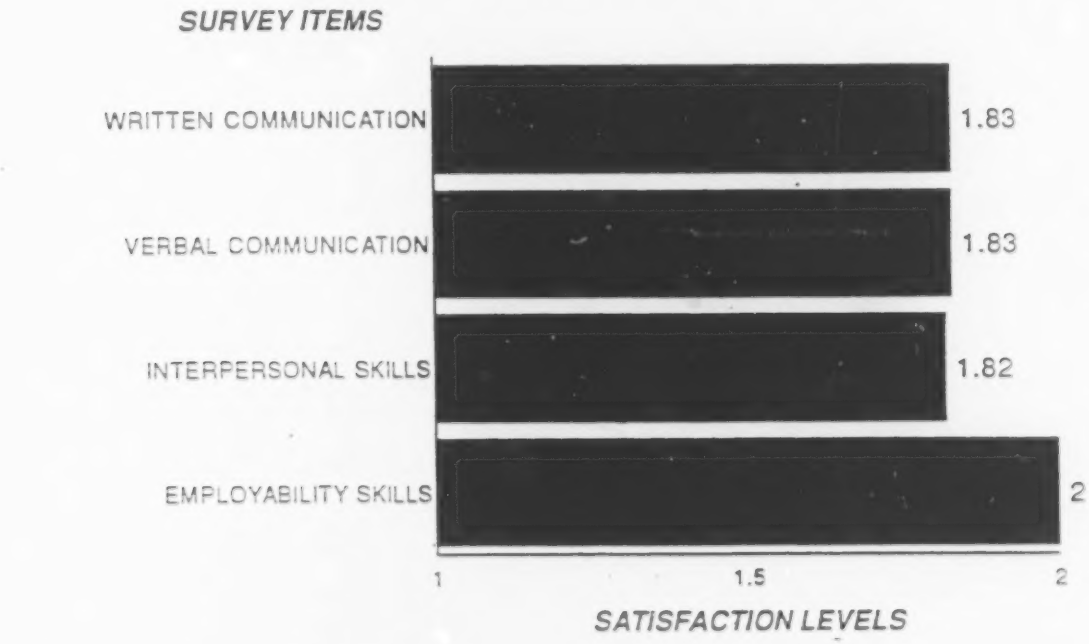
FIGURE 55
BASIC SKILLS
GENERAL SURVEY - PHARMACY

2= VERY SATISFIED, 1= VERY DISSATISFIED
1.5= NEITHER SATISFIED/NOR DISSATISFIED

FIGURES 55 COMMENTS: Employers from the general survey were very satisfied with all five basic skills listed. Employers were very satisfied with their employees' math, speaking, writing, and reading skills and less satisfied with their reasoning skills. Pharmacy employers were very satisfied with their employees' writing and reading skills.

b. Specific Survey - The overall score for specific survey basic skills was 1.87 or quite satisfied.

FIGURE 56
BASIC SKILLS
SPECIFIC SURVEY - PHARMACY



2= VERY SATISFIED; 1= VERY DISSATISFIED
1.5= NEITHER SATISFIED/NOR DISSATISFIED

FIGURE 56 COMMENTS: Specific survey employers were quite satisfied with all of the basic skills listed. Employers were most satisfied with their employees' employability skills where no dissatisfied responses were received from pharmacy specific survey employers.

GENERAL & SPECIFIC SURVEY BASIC SKILL COMPARISONS: Two survey items, writing and speaking skills, were on both surveys. Each survey type employer was very satisfied with employee verbal communication/speaking skills and their writing/written communication skills. Please note that there were no dissatisfied responses on the general survey concerning math, writing, speaking, and reading skills. On the specific pharmacy survey there were no dissatisfied responses concerning employees' employability skills.

2. Job-related Skills

The overall score for job-related and associated skills was 1.82 or very satisfied. Figure 57 shows responses for the eight general survey job-related skills. Figure 58 shows specific survey employer responses for eight job-related skills from the pharmacy licensure exam.

a. General Survey - The overall score for general survey job-related skills was 1.96 or very satisfied.

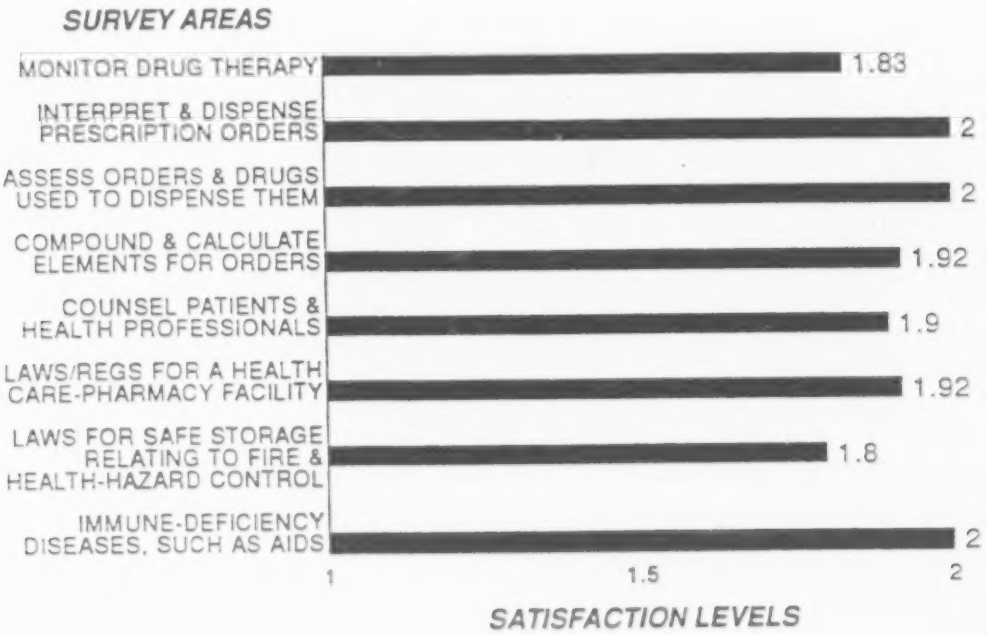
FIGURE 57
JOB-RELATED OR TECHNICAL SKILLS
GENERAL SURVEY - PHARMACY

2= VERY SATISFIED; 1= VERY DISSATISFIED
1.5= NEITHER SATISFIED/NOR DISSATISFIED

FIGURE 57 COMMENTS: All eight job related skills within this inquiry reflected very high levels of employer satisfaction. Five skills within this inquiry area: 1) the employees' quality of work, 2) their quantity of work, 3) their ability to work with fellow employees, 4) their ability to communicate with clients or customers, and 5) their overall technical skills, did not receive any dissatisfied employer responses.

b. Specific Survey- The overall score for specific survey job-related skills was 1.92 or very satisfied.

FIGURE 58
JOB-RELATED OR TECHNICAL SKILLS
SPECIFIC SURVEY - PHARMACY



2= VERY SATISFIED; 1= VERY DISSATISFIED
1.5= NEITHER SATISFIED/NOR DISSATISFIED

FIGURE 58 COMMENTS: Specific survey employers were very satisfied with all eight of the job-related or technical skills. They were most satisfied with their employees' ability to interpret and dispense prescriptions and medication orders, their ability to assess prescription or medication orders and drugs used in dispensing them, and their knowledge of sexually transmitted diseases, such as AIDS. All three of these areas did not receive a dissatisfied employer response.

OVERALL JOB-RELATED SKILL COMMENTS: Note the consistently high employer satisfaction ratings for all job-related skills on both pharmacy survey types.

SECTION XIV: PROPOSED FUTURE ACTIVITIES

"All employees need the verbal communication and interpersonal skills to be able to interface with the culturally diverse fellow workers, clients, customers, or patients they come in contact with."

... A Florida Employer

A. SPECIFIC PROGRAM AREA SURVEYS

This is the third year where targeted program areas were selected to obtain employer opinions. Response from employers has continued to approach 70 to 75 percent for each program-specific survey. This type of employer feed back can be directly associated with specific curriculum areas within programs and is thus valuable as an analysis tool. Employer feedback allows Department staff to evaluate specific program competencies and adjust or enhance specific program curriculum. It is recommended that as in prior years, this approach be continued with input from affected parties as to specific programs for review. It is further recommended that the University-level follow-up utilize the knowledge area-specific survey approach for this effort.

B. GENERAL EMPLOYER OPINION SURVEY

It has been three years since a general survey to a select sample of all vocational program completers has been conducted. While responses to these surveys were generally lower than specific surveys, they have indicated a level of employer satisfaction with job-related or technical skills and a level of employer dissatisfaction with basic skills. In light of a possible shift in these type of feelings, particularly regarding basic skills, it is suggested that a general survey be conducted next year within an area determined through consultation with interested parties.

C. SPECIFIC INDUSTRY/OCCUPATIONAL ANALYSIS

Considerable attention is consistently being directed toward educational processes to better train students to succeed in the world of work. A part of this attention resulted from the Department of Labor Secretary's Commission on Achieving Necessary Skills or SCANS Commission. SCANS has researched and defined a series of educational foundations and workplace competencies that are considered necessary to be competitive and successful in the workplace. It is suggested that next year's activities include continuing a comparative evaluation of student and employers perceptions concerning SCANS foundation skills and workplace competencies.